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ISSUE 158 MARCH 2015

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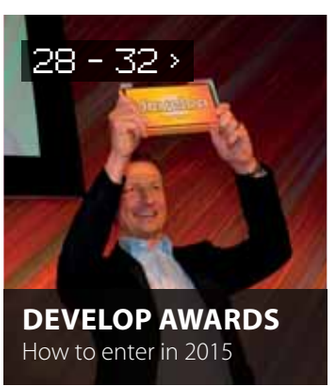

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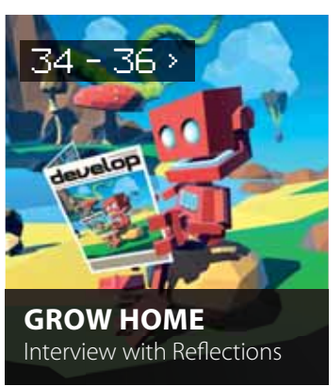

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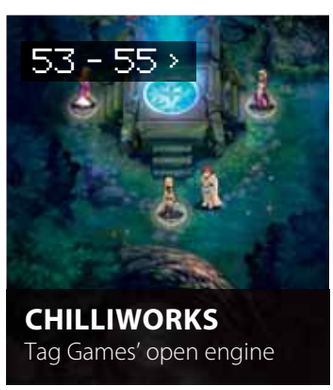

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EDITORIAL

DREAM BIG, PROMISE SMALL

AN ACORN THAT grows into a tree as the game progresses. A quest to conquer a kingdom, then as many hours of trying to protect it. A single player that serves as a god over all others.

Peter Molyneux's self-confessed shortcomings have been picked apart by the media in the past few weeks, but it's unfair that he is becoming defined by a string of broken promises – shouldn't he be defined by the ideas behind them?

To me, lambasting a creator for failing to deliver on his original vision is unjustified. Unlike games development, our imaginations aren't hindered by technical or financial limitations. The medium of video games would never have progressed as fast as it has if developers focused on the achievable rather than the aspirational.

Granted, when crowdfunding is involved there is a responsibility to ensure you can deliver what your backers are paying for, but this is a lesson hard learned as developers get to grips with this new funding model.

I would hate for Molyneux's treatment over *Godus*' unfulfilled promises to dissuade other studios from dreaming bigger. Regardless of his track record, he remains one of the most visionary games developers in a world still dominated by clones, quick hits and generic cash-ins.

Yes, the rise of indie developers has increased the number of visionaries within our industry, but for every earth-shatteringly fresh idea, there's a dozen match-three puzzlers, endless runners and Flappy Bird clones. At *Develop*, we receive countless emails from devs claiming to be reinventing a genre – they're almost never anywhere close, but who are we to crush their dreams? Embrace the impossible, and dream bigger like Molyneux.

James Batchelor
jbatchelor@nbmedia.com

The dangers of open development

As some developers come under-fire for over-promising on their games, we ask studios that are making their games in the public eye how to avoid angering fans during development to ensure a smoother process

by Craig Chapple

BROKEN PROMISES, OR the perception of this happening amongst consumers, has become one of the major talking points in development, particularly on studios making their games in the public eye.

Perhaps one of the biggest recent examples is *Godus*, made by Peter Molyneux's 22Cans. The studio made numerous promises on the game's development time, of multiplayer and a persistent hubworld – targets it has missed and features it has yet to implement. Though it is still in development, some of the anger from players and Kickstarter backers has raised questions over how studios should approach making games in the public eye, and how they inform paying consumers of features and the development roadmap.

Above: Godus. Below from top to bottom: Hellblade, Rust and Take on Mars

SUBJECT TO CHANGE

Rust developer Garry Newman, whose team at Facepunch is revamping the open world survival game's codebase, says he tries to make a conscious effort to under-promise, and never gives out deadlines on feature implementations. This is another pitfall that devs, and 22Cans, have suffered from, and it's a tactic that Valve itself has advised studios to avoid.

"I don't talk about stuff until it's implemented," said Newman. "I didn't become a games developer because I love stressing myself out.

"To me it seems like if you promise a bunch of shit, the chances that you'll actually do it are instantly slashed by about 90 per cent. When you discuss these things you already get the positive feedback, so actually implementing them gives you no joy at all."

Dominic Matthews, product development manager at Ninja Theory, which is adopting an open approach on *Hellblade* (*pictured left*), says making a development roadmap to give consumers an idea of a game's planned future can also be a dangerous strategy.

> ***"Explain why you're doing stuff. That's what people want."***
> Garry Newman

"We've been careful not to put a timeframe on our development roadmap for *Hellblade*," he said. "This is not because we have anything to hide, but because I don't want us to be making commitments to fans that we then might not want to stick to. Development roadmaps are always subject to change, so it is a dangerous game to be putting timeframes out there in the public domain if you're not confident of hitting them."

PUBLIC EDUCATION

With the wealth of Early Access games, Kickstarter-funded projects and other titles in open development, consumers are becoming increasingly aware of the complexities of games dev, and are also savvy to knowing when they are being strung along. But more still needs to be done when studios interact with their community, or they risk confusing and frustrating fans, or worse.

"I think Steam's Early Access is giving players a relatively decent idea of the time and process involved in game development, especially for those players involved in the game from the beginning," says Bohemia's Martin Melicharek, project lead on *Take on Mars*.

"That said, players are usually not exposed to the pre-production phases, which are usually about formulating and planning. Perhaps in this regard, it may be interesting to think of a way of passing this aspect of game development on to the players, as thinking up an idea and creating a plan for implementation are two very different realities."

Newman advises developers to talk more about the process, and says some people don't understand what goes into it because they simply aren't told.

"People think: 'you made a million dollars, so hire 100 programmers and make the game in two weeks'. They don't think through the logistics of that," he states.

"They don't consider that you might not want to fire 100 people in two weeks time. They don't consider that you're making games because you love making games, not because you love telling people to make games for you.

"All it takes is for someone on your team to sit down every week and write an update. Get technical. Explain why you're doing stuff. That's what people want. Honesty, frankness." ■

// MEANWHILE ON DEVELOP-ONLINE.NET

Why PlayTech acquired YoYo Games and what it means for devs
deve1op.net/17NGxuS

'Self-publishing is critical': Why n-Space teamed up with Digital Extremes
deve1op.net/17spnmt

Made to Order: Ready at Dawn talks quality over quantity in The Order: 1886
deve1op.net/1E3AYo9

Interface: Pitch your game to a room full of publishers

New showcase event in May will feature private pitch meetings and an interactive content marketplace

THE TEAMS BEHIND *MCV* and *Develop* are hosting a brand new event in May for developers to showcase their games, find investors and pitch ideas.

Interface takes place on May 14th in central London and will bring together developers, publishers, platform holders, investors and funding experts.

Interface will connect indies, start-ups and creators of new games with investors and backers in private pitch meetings; plus, there will be demo zones and breakout sessions dedicated to seminars on better business practices.

There will also be areas for studios looking to recruit, plus networking and lounge spaces.

Interface will be affordable for businesses large and small, with prices starting at just £49.

Registration for walk-in delegates opens in March.

First partners will be announced next week – sponsorship includes exhibition space, access to the B2B meeting/pitching service and prominent exposure.

Email **interface@nbmedia.com** to find out more.

Interface will also offer affordable demo areas for indies wanting to showcase games, premium spaces for publishers, content acquisition, technology, recruiters and platform holders looking to find games and partners; and over 300 delegates, including press, to present your creations to.

Contact Alex Boucher to find out more about sponsorship – email **aboucher@nbmedia.com** or call 01992 535 646.

Interface takes place at the Candid Arts Trust, a creative arts space in London next door to Angel tube station.

"Indies, investors and creators of interactive content have told us they want a new place to find partners, see games and pitch ideas," said *Develop* and *MCV* publisher Michael French.

"Interface focuses on quality meeting time – and that's what matters most if you're looking to score a deal or a new business." ■

Develop: Brighton seeks new voices

DEVELOP: BRIGHTON, THE annual UK developers conference, is calling for speaker submissions – with an emphasis on brand new faces.

Organised by Tandem Events, the event brings devs together for three days to discuss the trends and future of the sector. Studios can propose talks by heading to **www.developconf.com**.

Newcomers simply need to submit their contact details and a few ideas on what they would like to talk about, without the worry of having to put together a full proposal. The Tandem team will then get in touch and work out if they can get the applicant involved.

"We're keen to find and involve some of the shining new stars of the industry with a focus this year on brand new speakers at the conference," said director Ali Fearnley.

The deadline for speaker submissions is Thursday, March 19th. Topics are largely open, although some of the key discussion points planned for this year include virtual reality, free-to-play, funding, team management, discoverability, games-as-a-service, and running a successful business.

The focus on new speakers is part of this year's revamp for the conference, with a new-look website and logo already live. 2015 marks the event's tenth anniversary and Tandem is keen to keep things fresh.

"Over the last ten years, the conference has evolved to reflect the many changes the industry has gone through but without moving away from our core values of providing practical take-away and insights," said Fearnley. "It's a place were developers can share ideas and experiences, and inspire each other.

"So moving forward into our next ten years, we're keen to maintain those core values whilst also embracing what looks like a very exciting few years ahead."

You can find out more about the conference and how to submit a talk at **www.developconf.com** ■

DEVELOP DIARY

Your complete games development events calendar for the months ahead

AT A GLANCE

MARCH 2ND
GDC 2015
You know, that small shindig in San Francisco? See you there.

MARCH 15TH
Mothering Sunday
Try not to run down to Clintons at the last minute this year.

MARCH 16TH
Halo: Nightfall
Prepare for Halo 5 with Xbox's live-action series on DVD and Blu-ray.

MARCH 19TH
Battlefield: Hardline
Time for a game of cops and robbers, Michael Bay-style.

MARCH 24TH
Grand Theft Auto V
On PC. Yes, yet another version you'll almost certainly buy.

MARCH 27TH
Borderlands: Handsome Collection
Gearbox's bonkers RPG shooter comes to Xbox One and PS4.

DIARY DATES

GAME CONNECTION AMERICA
March 2nd to 5th
San Francisco, USA
www.game-connection.com

MARCH

GDC 2015
March 2nd to 6th
San Francisco, USA
www.gdconf.com

MOBILE WORLD CONGRESS
March 2nd to 5th
San Francisco, USA
www.game-connection.com

FUTUREFEST
March 14th to 15th
London, UK
www.futurefest.org

F2P SUMMIT
March 26th
London, UK
www.f2p-summit.com

APRIL

COUNTERPLAY
April 9th to 10th
Aarhus, Denmark
www.counterplay.org

GADGET SHOW LIVE
April 7th to 12th
Birmingham, UK
www.gadgetshowlive.net

MCV AWARDS
April 16th
London, UK
www.mcvawards.com

QUO VADIS
April 21st to 23rd
Berlin, Germany
www.qvconf.com

EVENT SPOTLIGHT

MCV AWARDS 2015

OVER 600 developers, publishers, retailers, distributors, and service providers will attend this year's MCV Awards, recognising the strongest performers across all sectors of the business over the preceding year.

The event returns to the Lancaster London Hotel for a fourth year, with entertainment on the night including a celebrity host, live music, photo booth, additional special features and late 2am finish.

A highlight of the evening is always the industry video that kicks off proceedings, featuring key execs from across the business. Plus there is fundraising activity for industry charity, GamesAid.

The shortlist has 71 different companies in the running for the various accolades. Warner, Ubisoft and

Sony each have ten nominations, EA has nine, Nintendo scores eight and Activision Blizzard grabs seven, while Xbox has six.

There are also three extra awards: Media Team, Export Team and Sales Triumph, all added after compelling feedback from the industry. Previously announced new awards include Indie Games Label, Agency Team and Buying Team.

The winners of the 19 awards will be announced on April 16th – as will the recipients of our three special awards: Unsung Hero, Person of the Year and Store Manager of the Year.

Gold tables at the MCV Awards cost £2,950, with a standard table of ten priced at £2,750. A single seat costs £285.

To book tickets for the MCV Industry Excellence Awards 2015, head to **www.mcvawards.com**, email Jess Farnan via **jfarnan@nbmedia.com**, or call 01992 535646.

To find out about sponsorship opportunities, please contact Conor via **ctallon@nbmedia.com** or Alex via **aboucher@nbmedia.com**. Alternatively, you can call them on +44 (0)1992 535646.

COMING SOON

DEVELOP #159
APRIL 2015

- QA & Localisation Special: We speak to experts about changing demands and standards
- Engines: In-depth look at the best game engines

DEVELOP #160
MAY 2015

- Analytics and payments: how to monetise your games and understand player spending habits
- Character modelling and animation

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the GameCreators

Variable declarations

//COMMENT: BUSINESS

Drilling down to the core

Nick Gibson considers how mobile games can appeal to core gamers

Games like Clash of Clans (right) may be listed as strategy titles, but mechanics that originate in Flash and browser games make it unrecognisable to fans of the genre on core platforms

WITH CORE GAMES genres dominating the sales charts for console, PC and mobile platforms, it's easy to think that core gamers themselves are a single, homogenous audience shared across different platforms. Not so.

Recent demographic studies have shown that crossover of gamers between mobile and PC/console has been comparatively limited to date. GameVision recently found that less than a third of western European PC and console gamers have spent anything on or in mobile games in the previous 12 months. In other words, two thirds of gamers on what are traditionally core game platforms do not see mobile as a worthwhile place to spend their gaming money. Why is this and is there a new opportunity to exploit?

We've learned you can't assume that every new game market will conform to the basic demand dynamics of the long-established console and core PC markets. These venerable markets have largely catered to highly discerning gamers willing to spend large amounts of time and money for deeply engaging, long-session gameplay experiences. As a result, the gameplay bar has naturally been set relatively high and the key to commercial success largely lies in high quality, fun gameplay.

But newer markets such as browser MMOGs and Facebook have evolved along different paths. Constrained by Flash technology's limitations and the demand for greater accessibility, core game design was distilled down to much simpler and more repetitive gameplay. As developers got to grips with freemium models, they quickly realised the impact their key design decisions had on revenues and so games evolved rapidly to focus on compelling experiences – often at the expense of being deeply engaging or, in some cases, fun.

THE ORIGINS OF MOBILE GAMES TROPES

Mobile developers took this ball and ran with it. Many of the current top grossing mobile games trace their lineage directly back to the browser MMOG and Facebook gaming era. Multi-layered stat-building gameplay and complex collective play systems – like clans – are often coupled with highly simplistic action gameplay with little player agency.

Examples include team battle games where the battles are auto-resolved, RPG missions that are completed by clicking a 'Complete Mission' button, and strategy games where units can only be deployed by the player but never controlled. Despite being labelled strategy, RPG and sports games, many PC and console gamers would barely recognise them as such.

These games aren't necessarily bad; they clearly have huge appeal as the mass of five-star reviews and huge download numbers demonstrate. However, they also clearly attract a different core audience to that found spending big on PC and console games. So what's putting them off?

> ***"While only a minority of core gamers active on other platforms spend money on mobile games, those that do are the most valuable."***

I doubt it's mobile's commercial models, because freemium and microtransaction models work well on PC and, increasingly, on console – despite the complaints of a tiny but disproportionately loud minority.

I also don't believe it is a significant technology issue either: current mobile and tablet technology offer huge games processing power.

I believe that it is primarily gameplay appeal that divides these core player bases. If so, this hints at a very interesting opportunity to combine high yield monetisation strategies with more traditional gameplay experiences that might appeal to this potentially significant, untapped core mobile gamer market. And there's research to support this view.

CORE APPEAL

EEDAR found that there is a direct correlation between spending in mobile games and console usage with the largest spenders more likely to be console gamers. So while only a minority of core gamers active on other platforms spend money on mobile games, those that do are amongst the most valuable. Theoretically, anyone able to unlock the large, untapped market of core gamers yet to embrace mobile games would potentially access the highest value playerbase.

Mobile gaming may not support core games of the complexity and depth of those found on PC and console for some time – if ever – but I can see the gap between these two core markets being steadily narrowed.

In such a clone-heavy market, once one leading player steps in this direction, a mass of others will quickly follow. We might even get to a point where commercial success will be dependent on not just compelling game designs, but also genuinely fun ones. ■

Nick Gibson is the commercial director of Gunjin Games, a mobile and tablet games studio staffed by veteran developers based in Brighton, UK.
www.gunjingames.com

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//COMMENT: CHARITY

Games as a force for good

Playmob's **Jude Ower** discusses how games have been used to highlight and prevent cyberbullying

GAMING FOR GOOD has become a growing area of interest within the industry.

In the past 12 months, firms such as EA, Rovio, Miniclip and Jagex have taken it upon themselves to support varying global charities. Even YouTube celebs such as Yogscast, PewDiePie and Athene have been supporting causes close to their hearts.

It is not a revolutionary phenomena to see celebrities and media support charities. Thanks to the rapid growth of the industry, gaming logically seems to be the next sector to embrace this. For developers, the real USP is this: Games tell stories.

As players, we interact with these in a very personal way. We enable them, act them out, lose ourselves in their content, and fully embrace their ability to transport us from one locale to another with the click of a button.

Charities themselves have incredible stories to tell that can attract huge support from far and wide. What if we combine the power of real world calls for help with games?

BEATING THE BULLIES

There are so many great examples to talk about, but one in particular stands out for me: *High School Story* by Pixelberry Studios.

In October 2013, the team at Pixelberry had been contacted by a player who was distressed about being cyberbullied and not sure where to go for help. Concerned for the welfare of the teenager, the devs found a helpline for the young person to get expert advice. This made them think: how many other young people playing *High School Story* are suffering with the same issues and don't know what to do?

A cyberbullying quest was integrated into *High School Story* helping to raise awareness, provide support and raise money for a particular charity: Cybersmile. Pixelberry enlisted the organisation's support to ensure the content within the quest was accurate.

Finally, the team added a special charity bundle, purchased with virtual currency, and a decorative flag to allow players to show their support within the game for this cause.

Instantly, *High School Story* players flocked to the quest and bundle. Cybersmile recorded a spike of 100 new calls per week and around 3,000 new young people called for support.

Those who needed support were directed to Cybersmile where they could talk to an expert. By the end of the campaign, over $320,000 was raised to support the 24-hour helpline they have running.

Following the campaign, Pixelberry received a heart-warming letter from a parent of a *High School Story* player. The mother told of how her daughter had been left distraught after being bullied online and didn't know who to turn to. She discovered Cybersmile through *High School Story* and then found the courage to reach out and gain the support she needed. The exact sign off on the email was: "Thank you for saving my daughter".

The world, and especially the media, must see games as a force for good and start to focus on how games can help instead of harm. Games can save more lives than we can ever imagine and this is just scratching the surface. ■

A special quest (left) added to High School Story raised awareness of cyberbullying, while a bundle of in-game items raised money for charity Cybersmile

Jude Ower is CEO and founder of Playmob, an organisation dedicated to helping connect games developers with charities and other causes. You can find out more about their work by headng to: **www.playmob.com**

//EXTRA CONTENT ONLINE

"When you're psyched about a project, it becomes really hard to think about anything but your work. And that can be really dangerous."

Doing crunch right
Dean Tate, independent developer
deve1op.net/1uTmUGp

"Working at Nintendo taught me to ignore the rest of the industry; instead just think about your own game and what you want it to be."

Restarting after relocation
Rhys Lewis, Squarehead Studios
deve1op.net/1CzZdWy

"Finishing a game is just the start. There is a huge amount of marketing to be done to get it to the players."

The evolution of mobile game marketing
Mike Hergaarden, M2H
deve1op.net/1uYE0sb

To see all of our reader blogs visit: www.develop-online.net | Email cchapple@nbmedia.com to contribute your own blog

BETA

DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

INDIE PUBLISHERS
We talk to the companies helping market new games
P15

GDC GUIDE
Your rundown to the essential sessions and meet-ups
P19

DEVELOP AWARDS
Find out how to enter this year's prestigious awards
P28

What next for indies?

The indie revolution is hitting its next phase. With discoverability challenges and the term's definition becoming increasingly indefinable, **Craig Chapple** asks what the future holds for gaming's most creative element

IT'S A NEW era for indie developers.

The days of rocking up on digital stores with your great game and getting thousands of sales are nearly gone. All platform holders want your games, and have opened up their marketplaces more than ever before to ensure your title, potentially the next big hit, is on their hardware or store.

But now there are more competitors than ever. Not only are there multi-billion dollar companies dominating the App Store and thousands of amateur and indie developers, some of the previously successful indies are getting more ambitious and ploughing more money into new, bigger games. And with them they'll bring their fanbase.

So, ironically, does this mean the death of the indie scene is imminent? Not quite.

"I think a lot of devs are worried about the door slamming shut behind those of us who got through in the last few years," says *Thomas Was Alone* and *Volume* developer Mike Bithell.

"It's certainly hard to get noticed right now via the storefronts, but I hope that the next generation of indie devs are going to be far, far more innovative than we were. We already see folks targeting YouTube taste-makers, big mainstream sites, or even asking more established devs to raise the word. It's going to be fascinating being outclassed and outpaced by the devs who work this stuff out."

Maia creator Simon Roth – who successfully raised £140,481 for the god game and is now even setting up his own

Volume (Main) is Mike Bithell's bigger-budget follow-up game to hit puzzle-platformer Thomas Was Alone

Top-to-bottom: Thomas Was Alone and Volume creator Mike Bithell and Mode 7 Games MD Paul Taylor

company, Machine Studios – thinks the games industry will see more indies break out, as "sales are rarely the single driving force in the core of the independent scene".

"We might not witness as many rags-to-riches stories as we used to, but we will see a lot more modestly successful businesses spring up," explains Roth.

"The marketplace is crowded, but a lot of it is dreck and, unlike a few years ago, savvy consumers have far more ways to filter through it and discover the games they might like. Not to mention there are far more people actively buying indie games now."

FIGHT FOR SURVIVAL

One way to get noticed comes from the creativity often found in the indie scene in the first place. Innovative, unique gameplay can make games stand out, whether for target niche audiences or mass market, but a great game may not always be enough. Though as Roth notes, while the number of game releases may have exploded, "the increase in quality titles has only grown slightly".

Paul Taylor, MD of *Frozen Cortex* developer Mode 7 Games, says the most important thing for indies is that combination of concept and polish, but notes there are other areas to help maximise success should you find it.

"If you have a concept that is really attractive on a particular platform and you execute it so it's visually appealing, that's all you need to do if it's compelling enough," says Taylor.

"If you don't magically come up with the secret formula, then I think platform diversification can be really important. It's a double-edged sword though, as there's no guarantee a game will work on any particular platform. Platform holder buy-in on anywhere other than PC is absolutely essential and you won't get anywhere without it.

"Surviving is about planning well for disaster scenarios. Standing out is about – dishearteningly – being amazing, or amazingly lucky, and sometimes both."

Bithell agrees on the importance of platform holder buy-in, and says if you can get it, then why not use it?

"It's certainly possible to survive without platform holder help," he states. "My question would be, why would you bother? Getting platforms on side is a massive help. They have access to an audience beyond anything any individual could ever achieve. Ultimately, everyone needs content, so if you're producing content that you can convince platform holders there is an audience for, that puts you in an incredibly strong position."

FURTILE GROUND

As indies look for the best ways to survive, is there an ideal platform to launch a game on? Of course, the platform can depend on the type of game an indie is making. What's good for console may not be good for mobile, and what's good for mobile and tablets may not work on PC. But finding the safest place where your game is most likely to succeed is a factor many indies will take into account when developing their title.

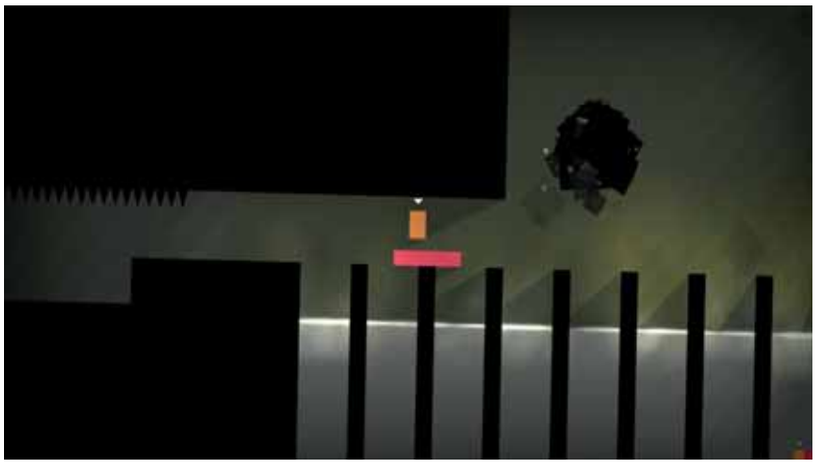
> ***"Steam is far from perfect. But it offers better opportunities for indies than any other platform."***
>
> Imre Jele, Bossa Studios

Imre Jele, co-founder of *Surgeon Simulator* developer Bossa Studios, says PC – particularly Steam – is the most important platform for indie developers right now, and believes it will remain that way for a while longer.

"When they were a closed platform, some people accused Valve of elitism as they rejected many games sent to them," says Jele. "When they opened up to become more democratic, they were criticised for allowing bad games to appear on the shop. Even the latest range of community and discovery features got flack despite the fact that there isn't any better solution out there to allow players find games they might like.

"Steam is far from perfect. But it still offers better opportunities for an up-and-coming indie developer than any other platform."

Roth agrees, and says PC will "remain the bastion of indie development", with the help of direct sales, Steam, Humble and GOG



> ***Devs have more power and control over their work than ever. There's no turning back from that.***
>
> Mike Bithell

offering a varied and reliable revenue stream. He says, however, that other platforms such as the PlayStation 4 and Wii U are also good options for indies.

"Sony has done a good job with encouraging established developers onto their platform and, thanks to some excellent first-party titles and recent price cut, the Wii U is now finally getting some decent market share so has become a serious consideration now too," he says.

Bithell says a few reasons PC remains the safest place for a small indie developer to release their game are the specialist coverage, YouTubers and taste-makers that will drive an audience to your game in a way that mobile and console don't approach yet. It should be noted though that both Microsoft and Sony are making this easier on their platforms, particularly when compared to last-gen.

"It's also the easiest platform to get a game made for technically thanks to middleware," he says.

"Finally, mobile games ported elsewhere carry a taboo for the platforms' native audiences. It's far more commercially viable to port a PC hit to mobile than the other way around. Apple loves a critical darling."

THE NEW MID-TIER

For those small developers that saw early success a few years ago during the initial stages, and arguably the peak of the indie revolution, the money brought in has meant, if they choose to do so, these devs can expand their teams and invest more in new projects and ambitious projects.

Though still retaining the indie tag, many of these have now grown to employ a dozen or dozens of staff, working on one big project or multiple titles.

As Jele says, these developers then go head-to-head against the new indies who still work from home alongside a full-time job, creating an extra challenge for the new generation. And this presents its own challenges to the world of indies and how those developers now define themselves and operate.

"The bigger budgets these developers can put behind their games can unlock new opportunities and better and bigger games, which is great," says Jele.

"At the same time I see many of these indies struggle as they have to manage teams and act like a 'proper' business. Many of these great creators are also plagued by 'impostor syndrome' as they prepare for the dreaded second album. And at the end of the day, you are as good as your latest game."

Taylor says that when expanding the team for *Frozen Synapse* follow-up *Frozen Cortex*, the main change for him was the management of people who are working at the studio full-time.

"If you normally just work with contractors or on your own, that's a big change that you have to get used to," he says. "I think we'll see some exciting games with a bigger scope from teams who are doing that."

He adds however that he's not sure if these indies will be forming the new 'mid-tier' as traditionally defined, given the variability of games in terms of profitability and development budget.

"I kind of think any idea of tiers has been blown apart at this point," states Taylor. "You can make a multi-million selling title which just has very simple graphics and a very low art budget – look at something like *Plague Inc*., *Democracy 3* or *SpaceChem* – so it's really more about hunting for these concepts than it is about investing large amounts of money in art, sometimes."

Bithell, perhaps one of the most recognisable indies around, says that if *Volume* does well he plans to expand the team and invest more in new projects, looking to the games companies of old for inspiration. He explains, however, that this will be a slower, steadier and altogether more conservative growth than what has often occurred before.

"I'd expect more indies to do the 'breakout hit / more mainstream follow-up / mid-scale production' progression over the coming years," he says.

"I'd point to companies like Introversion and Mode 7 Games as folks way ahead of the curve on this. It's not for everyone though, and we shouldn't dismiss those who want to keep things small and focused. They'll outlive us all.

"The vital difference is the changed relationship with publishers and platformers. Developers have more power and control over the work they do than ever. I don't think there's any turning back from that."

WHAT DOES 'INDIE' MEAN ANYWAY?

But as indies take on new challenges, and the term stays attached to slightly bigger studios and even latched on to by large, triple-A firms for their smaller outings, what does indie even mean anymore? Has it lost any real definition?

Bithell says it's a word he's becoming less and less comfortable with using.

"Many of us are playing with budgets that are many times greater than what would be reasonably called 'indie'," he states.

"We got too successful. Right now the division on console and Steam is what? Triple-A – less than 20 games a year – and indie – more than 2,000. To me, that's an indicator that we need to get better at differentiating our work, and invent some new – almost immediately outdated – categories.

"Right now 'indie' means *Minecraft*, *No Man's Sky*, and a Twine game. That's a pretty useless word. I feel like I'm stealing someone else's word. It belongs to folks like the dude who made *Thomas Was Alone*." ■

Top to bottom: Maia developer Simon Roth and Bossa Studios co-founder Imre Jele

Far upper left clockwise: Simon Roth's Space god game Maia, Mike Bithell's puzzle platformer Thomas Was Alone and Mode 7's turn-based tactical game Frozen Cortex

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RADIANT WORLDS

Rise of the **indie publishers**

As indie developers face new challenges, a new wave of publisher has emerged to combat the challenges of discoverability. **Craig Chapple** speakers to the experts about what is behind these new businesses, and if devs should seriously consider their support when releasing their game

AS WE'VE SEEN on the previous pages, the 'indie' game development landscape has changed and continues to evolve at apace. Getting your game discovered is becoming increasingly difficult – though not impossible – and perhaps more time than ever needs to be dedicated to the marketing and promotion of your game.

This realisation has spawned a wide variety of indie publishers during the last couple of years. Long-time UK developer Team17 has added a publishing arm to its operations, helping release titles such as prison game *The Escapists* and stealth hacking title *Light*. Digital retailer Green Man Gaming has also expanded into publishing with Green Man Loaded, and is helping bring god game *IdolHands* and physics-based puzzle title *Keebles* to market.

RISING UP

A myriad of other publishers, including Versus Evil and Devolver Digital, are also pledging their services to indies, claiming to offer a helping hand, but one that will not force developers into signing their IP away. Of the three publishers we spoke to, all of them said they have no intentions of owning IP rights.

"It was past time for a massive shake-up in the traditional business retail/publisher models," says Team17 MD Debbie Bestwick.

"Traditional publishers and retailers have been failing content creators – independent developers – for years by not taking enough risks and very one-sided revenue/royalty deals. Overnight we saw an explosion of options and with Valve opening up their Steam distribution network to third-parties, all of a sudden content creators had a choice.

> ***"Traditional publishers and retailers have been failing content creators for years."***
>
> Debbie Bestwick, Team17

"Publishing is a skill that even great games need. Thankfully for everyone's sakes, we have seen the emergence of a new wave of super smart publishers who understand the nature of agile publishing."

Steve Escalante, GM of *Banner Saga* publisher Versus Evil, says discovery is one of the biggest challenges for indie developers, whether their game is coming to mobile, PC or console. He explains that a publisher's job is not to just create a PR buzz, but add value to all areas of the marketing phase pre and post-release, as well as supporting developers in other ways. This is perhaps something indies should take careful notice of if looking for a partner.

"A solid indie publisher is not just bringing PR that is going to create buzz, but brings access to more events, communities, a media buying team that can add value to advertising and branding, and a product strategy that works to find a good month to launch, looks at competitive windows, has a solid understanding of when sales occur and more," says Escalante.

"All of this can roll into helping with the crowded retail space."

GETTING TO MARKET

To overcome that discoverability issue, developers – whether deciding to opt for a publishing partner or not – have a lot to consider. As well as building the game itself, creators need to determine the best time to launch their game, a factor perhaps made more complex by Early Access on Steam. While providing a great space for feedback, developers can also fall into the trap of launching their title too early and harming their game's chances. There are also other factors to be mindful of, says Escalante.

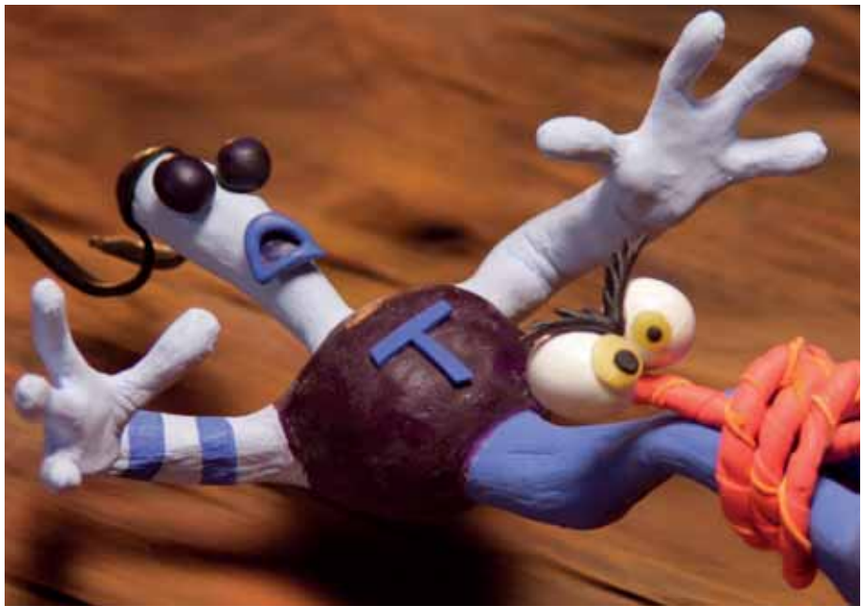
"Look at your competitive window and understand what is occurring in the industry," he explains.

"Are you launching on top of a big sale? Have you given yourself enough time to get through certification with first-party? What events are occurring? Knowing and understanding these events will help you

Top to bottom: Green Man Loaded's Gary Rowe and Steve Escalante, GM of Banner Saga (main) publisher Versus Evil

Debbie Bestwick (above) says consumers won't accept anything less than a professional product, and indies must be aware of QA, usability, localisation, compatibility and age ratings before they release their game

Indie games going down the publisher route include Idolhands (top left), The Escapists (above) and Amikrog (below)



build out a tactical strategy for when it is right to launch a title – but look to the future. When is the first time you might go on sale? Is that during a holiday? Is it too close to your pre-order offer?"

Green Man Loaded EVP Gary Rowe says the very first conversation he has with developers is how they're going to talk about their game. He says often their primary task is making the best game with the time and budget they have available. He notes, however, that developers also need to start planning their launch right from the start.

"Factoring in time to build good supporting art assets – key art, trailers, and so on – is important, and they also need to allocate time to spend talking about their game via social channels, such as blogs, Twitter, Twitch, etcetera, at every stage of the dev process, so they're building up an audience before launch."

Bestwick pointedly states that indies need to be aware of "everything" when launching a new game.

"Just because they are an indie developer, it doesn't mean consumers will accept anything less than a commercial professional game being released," she says.

"So usability, QA, localisation, compatibility testing, age ratings – where applicable; with platform holders there are set conditions that must be met. It's fundamentally important to ensure the game doesn't go out broken and is as bug free as possible."

EYES ON THE LONG-TERM

Bestwick says, however, that this is the easy bit; what developers need to be on top of is the lifecycle management of their game. She explains that though indies who are focused on digital no longer have to worry about shelf-life, they still need to manage their title to sustain long-term revenue and achieve maximum returns.

"This is a clever combination of production updates, clever marketing and sales planning," she says.

Rowe says long-term success can be achieved by fixing bugs and making small improvements by listening to feedback, while additional content also helps drive promotional awareness and allows the conversation to continue post-release.

"Remaining vocal, being visible, and keeping active is hugely important, and is where publishers like Green Man Loaded can provide valuable additional support," he says.

One method of ensuring revenue comes in long after a game's release is through sales and bundles. Though it can be extremely effective for many indies, Escalante advises that developers don't always need to put their games on sale, and should make sure they build value for their title.

"Keep your value, go on sale when you need to, go in bundles when it's the right time in your lifecycle, and keep that value promise you have made to your customers," says Escalante.

> ***"Devs need to allocate time to talking about their game via social channels at every stage."***
>
> Gary Rowe, Green Man Loaded

"Lastly, stay in contact with your retail and platform partners to make sure you are part of their plans.

"This is your modern day retail storefront that have sales, events, holidays and more that you benefit from. Push to be a part of it, but don't sell yourself short."

IS A PUBLISHER RIGHT FOR YOU?

With these considerations and others in mind, in can be a difficult decision for developers when considering if their game needs publishing help. Rowe says that a good publishing partner is one that will know how to manage the price lifecycle of the product from pre-orders to release through short-term promotions, offers and more.

Publishers may also have a wider network that developers may find difficult to access, such as YouTube, social communities and affiliate marketing partners.

"Getting this right can dramatically improve sales revenue," states Rowe. "Perhaps more importantly, a good publisher should be able to show they know how to drive awareness of a new game over and above simply loading the game up on a store.

"This must include a solid PR strategy and marketing plan to generate interest and awareness in the title, which requires specialist expertise, and is why many developers consider working with a publisher who has these resources and skills. A good publisher will have access to, and influence with, a large community of gamers and press."

Bestwick admits some indie developers can do everything themselves, as shown by developers such as Simon Roth and Mike Bithell in our '*What's next for indies?*' feature on page 11. She states, however, that there is still a cost to that, and believes it is important to partner up with someone that has strengths in areas they don't.

"Our own programme is more about collaborations in publishing as well as helping them make the best game possible," she says.

"Think smart, know your strengths and seek out people who can complement you and help you achieve maximum success." ■

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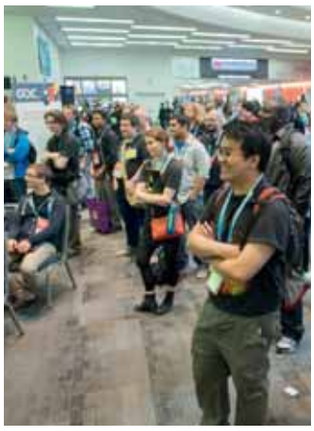
GDC 2015: The future starts here

Once again, the games development industry is invading San Francisco for just one week. To help you make the most of your time, **Develop** presents its comprehensive guide to the 2015 Game Developers Conference to ensure you don't miss a thing



BE PREPARED

CHILDCARE
KiddieCorp is running a new childcare service for children aged six months to 12 years. It will run all week from 9am to 6pm (4pm on Friday) in the West Mezzanine Rooms 274 to 276. Snacks and drinks are available, but meals must be provided.

FLASH FORWARD
Not sure which talks to attend? GDC's annual quick-fire preview returns at 9.30am on Wednesday, March 5th in the West Hall's GDC Ballroom. The conference's Advisory Board has once again picked a selection of speakers who will each have 30 to 45 seconds to convince you to attend their talk.

DEVELOP
Be sure to bookmark **www.develop-online.net/gdc**. We'll be bringing you all the latest news, interviews and announcements throughout the week and beyond. Got something you want to shout about? Email: **jbatchelor@nbmedia.com**.

GDC APP
The official GDC mobile app is available on iOS and Android, with a HTML5 version at **app.gdcconf.com**. The application enables attendees to quickly access and manage their meeting schedule, browse the expo floorplan, and search listings for attendees, speakers and exhibitors.

WHERE TO REFUEL

Want to grab a beer after the conference? Here's our recommendations:

- The Thirsty Bear, 661 Howard Street, CA 94105
- The W Hotel, 181 3rd St, CA 94103
- Chevy's Fresh Mex, 201 3rd St, CA 94103
- Jillian's, 175 4th Street, CA 94103

THE ESSENTIALS

WHERE
Moscone Convention Center, 747 Howard Street, San Francisco, CA 94130

WHEN
Monday, March 2nd to Friday, March 6th

Summits, Tutorials and Developer Days:
Monday and Tuesday, 10am to 5.30pm

Main Conference:
Wednesday, 11am to 6pm; Thursday, 10am to 6.30pm; Friday, 10am to 4pm

South Hall:
GDC Expo
Wednesday & Thursday, 10am to 6pm;
Friday, 10am to 3pm

North Hall:
Career Center, Business Center and GDC Play Pavilion
Wednesday & Thursday, 10pm to 6pm;
Friday, 10am to 3pm

HOW TO REGISTER
Registration is open from 3pm on Sunday, March 1st to 3.30pm on Friday, March 6th.
For assistance, call +1 415 947 6926 or +1 866 535 8997 or email: **gdcregistration@ubm.com**.

ON-SITE PASSES
If you didn't pre-register, you'll be able to purchase the following at Registration:
All Access Pass: $2,095
Main Conference Pass: $1,695
Summits, Tutorials & Bootcamps Pass: $995
Audio Track Pass: $895
Expo Pass: $250
Student Expo Pass: $75 (Available Friday only)
Independent Games Summit Pass sold out.

MUST-SEE EVENTS

GDC Play
North Hall – Wednesday to Friday
Developers showcase their games to countless industry professionals, enjoying feedback on their upcoming games and offering networking opportunities.

The Game Developers Choice Awards
GDC Ballroom, West Hall – 6.30pm, Wednesday
The 15th annual Game Developers Choice Awards will once again recognise the best in creativity, artistry and technological genius, honouring both rising stars and industry veterans alike.

Independent Games Festival Awards
GDC Ballroom, West Hall – 6.30pm, Wednesday
Handing out eight awards and over $55,000 in prize money, the 17th annual IGF Awards will reward the most innovative indie games. You can check out more promising indie titles at the IGF Pavilion in the GDC Expo from Wednesday to Friday.

15 sessions you must not miss

With more than 500 sessions, it's easy to get lost in this year's conference programme. Fortunately, we've picked out our most anticipated talks to help you catch the best of GDC 2015

MONDAY, MARCH 2ND

Math for Game Programmers
10am to 5.30pm,
Room 304, South Hall
Programming track
Experts from Google, Activision, Ready at Dawn and more teach devs the core mathematics behind aspects such as 2D and 3D graphics, physics simulation and nuanced gameplay in a day packed with tutorials and microtalks.

The Uncomfortable Truth About Mobile Games
10am to 11am,
Room 2011, West Hall
Business, Marketing and Management track
Pollen VC discusses how studios can balance monetisation with increasing user acquisition costs in the increasingly competitive mobile market, touching funding paid promotions and generating long-term value from your users.

Leading Players Astray: 80 Days & Unexpected Stories
11.50am to 12.15pm,
Room 2005, West Hall
Independent Games Summit
Freelance writer Meg Jayanth draws on her experience with Inkle Studios' mobile hit *80 Days* as she talks about how indie developers can create stories that do more than just explain mechanics and motivation.

TUESDAY, MARCH 3RD

Everything You Need To Know About YouTubers But Were Afraid To Ask
1.45pm to 2.10pm,
Room 2005, West Hall
Independent Games Summit
YouTube personality Alex 'Baer' Larrabee details the process he and his peers go through when choosing which games to play and promote, and suggests how devs can better interact with YouTubers.

Measuring and Manipulating Player Trust through Choice and Game Mechanics
2.20pm to 2.45pm,
Room 306, South Hall
AI Summit
This lecture will show how 'trust' can be formalised mathematically using decision theory and game theory, allowing developers to create believeable NPCs and depict the consequences of player actions.

When Story is the Gameplay: Multi-Genre Writing for Telltale Games
4.30pm to 5.30pm,
Room 3016, West Hall
Game Narrative Summit
The team behind *The Walking Dead* and other episodic hits discuss how they create stories in virtual environments, and how the line between writing and game design has become increasingly blurred.

WEDNESDAY, MARCH 4TH

Building Fear in Alien: Isolation
12pm to 12.30pm,
Room 3020, West Hall
Design & Visual Arts tracks
Creative Assembly's Al Hope looks at how the team used visuals, audio and the Xenomorph's senses to ramp up the tension in the best-selling sci-fi horror title. *For more details, be sure to check out our making of feature on pg. 39.*

Designing for Empathy with Sensory Replication in D4
2pm to 3pm,
Room 3016, West Hall
Design track
Deadly Premonition dev Hidetaka 'Swery' Suehiro discusses what his new tech technique 'sensory replication' involves, how it engages players emotionally and how it helps those who hate motion controls to enjoy a Kinect game.

Transitioning from Linear to Open World Design with Sunset Overdrive
3.30pm to 4.30pm,
Room 3016, West Hall
Design and Production tracks
Insomniac Games discusses how, after 20 years of developing linear titles, it tackled the challenges of open world design. The team will also directly compare the workflow on *Sunset Overdrive* to *Resistance 3*.

THURSDAY, MARCH 5TH

Peggle Blast: Big Concepts, Small Project
10am to 11am,
Room 3006, West Hall
Audio track
PopCap's audio team reveals how they achieved high-quality audio within just 5MB in *Peggle Blast*, using MIDI music, procedural audio synthesis and more to produce 30 minutes of music and hundreds of sound effects.

Blending Cinematic and Gameplay Animation in The Order: 1866
11.30am to 12.30pm,
Room 3003, West Hall
Ready at Dawn's lead animators describe how they had to rethink traditional animation procedures for the PS4 exclusive, using the same assets for both cutscenes and gameplay.

Indie Polish: Making the Most of the Last 10%
3pm to 3.30pm,
Room 2015, West Hall
Design and Visual Arts tracks
Thomas Was Alone creator Mike Bithell offers advice on how to best spend your time when polishing your game for launch. What should you prioritise? He will show practical examples that other indies can apply to their own projects.

FRIDAY, MARCH 6TH

Classic Game Postmortem: Loom
10am to 11am,
Room 135, North Hall
Design track
Veteran games developer Brian Moriarty looks back at the development of 1990 graphic adventure game *Loom*, a mature fantasy title with an innovative interface that paved the way for countless LucasArts classics.

Driveclub: Coffee and Skidmarks
11.30am to 12pm,
Room 3006, West Hall
Audio track
SCEE and Evolution Studios discuss the tools, tech and recording techniques that went into the PS4 racer, touching on some of the challenges encountered when working on a brand new console.

Black Characters in Games: Diversify Your Game
1.30pm to 2.30pm,
Room 124, North Hall
Advocacy track
This lecture will discuss game characters in present-day titles from both a protagonist and antagonist point of view as they pertain to black people and minorities, including the perception of both the characters and the dev team.

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Who's heading to GDC 2015?

Develop helps you track down the biggest exhibitors and the companies most relevant to your business

IT'S ALL WELL and good that the entire games development industry is in San Francisco for a week; but if you can't find firms that will help you release your game or expand your business, you've missed a prime opportunity.

With more than 300 exhibitors crammed into the Career Center, the Business Center, GDC Play, various pavilions and, of course, the main expo, it can be difficult to make the connections you need. Fortunately, *Develop* has made a rundown of just some of the companies you might want to arrange meetings with.

ABERTAY UNIVERSITY

Booth 1238, GDC Expo

The world famous academy of games design is just one of several Scottish firms heading to San Francisco this year, informing more studios about the Dare to be Digital program and its increasingly global reach.

AESVI & ITALIAN TRADE COMMISSION

Booth 702, GDC Expo

Italian trade body AESVI is once again teaming up with the government industry to help spread the word about Italy's growing development scene. Studios represented include Bad Seed, Digital Tales, Forge Reply, MixedBag and Studio Evil.

AUDIOKINETIC

Booth 836, GDC Expo

The tools firm behind audio software Wwise and SoundSeed will be on hand to demonstrate both its products and see how it can help more developers with their sound design needs. Wwise has most recently been used in *Elite: Dangerous* and *Peggle 2*.

CRYTEK

Booth 1424, GDC Expo

Last year, the *Crysis* developer showed off the latest advances for its high-end CryEngine and launched a new subscription model, allowing developers of all sizes to access their technology for just £6.99 per month. Expect more CryEngine updates during the event this year.

DIMENSIONAL IMAGING

Booth 115, GDC Expo

Celebrating its 12th year in business, Scotland-based Dimensional Imaging is one of the leading players in the field of performance capture. The firm will be showing off its latest technology, including the DI4D Head Mounted Camera, used in Remedy's upcoming *Quantum Break*.

EPIC GAMES

Booth 1024, GDC Expo

After successfully launching Unreal Engine 4 and its new subscription model at GDC 2014, Epic Games will once again be demonstrating its high-end game development engine. It will even be showing off demos created by members of the Unreal Engine community.

FIRELIGHT TECHNOLOGIES

Booth 624, GDC Expo

The Australian creators of FMOD, one of the industry's most widely-used audio tools, will be available to discuss the merits of using its software in your games. Having been used in Xbox's *Forza* series and Supergiant's *Transistor*, FMOD is useful for studios of all sizes.

GEOMERICS

Booth BS2622, Business Center

The ARM-owned company behind the Enlighten tool will once again be seeking to make new connections with developers and show off the capabilities of its middleware. Geomerics will also present a talk on global illumination using Enlighten on Wednesday, March 4th.

GOOGLE

Booth 502, GDC Expo

While the company may be taking a step back from its wearable Glass experiment, the internet giant will still be on hand to discuss how games developers can make money with their titles on Google Play. The firm is also hosting a full Developer Day on Monday, March 2nd.

GRAPHINE

Booth 101, GDC Expo

Belgian middleware provider Graphine Software specialises in texture streaming and compression technology with its specialised Granite tool that minimises memory usage, storage size and loading teams in games for any platform. You can head to their booth to see the technology in action.

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HAVOK
Booth BMR2822, Business Center
Middleware giant Havok will be showing off major enhancements to its widely used Physics, Destruction and Cloth tools, as well as brand new technology during GDC. The company has teased that the new tech will enable devs to make purely visual effects fully interactive.

IMAGINATION TECHNOLOGIES
Booth 1142, GDC Expo
The firm behind the PowerVR technology will once again be showing off the high quality graphics enabled by its hardware, which can be found in a wide variety of devices. The company is also hosting a full day of sessions on Tuesday, March 3rd as one of the sponsored developer days.

KEYWORDS STUDIOS
Booth 1744, GDC Expo
Following a string of acquisitions over the past year, the ever-growing Keyworlds Studios will be on hand to discuss the wide variety of services it can offer developers and other games firms, from QA and localisation to art outsourcing and audio production.

MARMALADE TECHNOLOGIES
Booth 930, GDC Expo
The cross-platform tools specialist will be heading to San Francisco in search of even more development partners, whether they're small indie devs or larger studio organisations, with the promise of helping games makers bring their titles to multiple platforms as smoothly as possible.

MICROSOFT
Booth BS2522, Business Center
With Windows 10, Xbox One and much more to talk about, there will be plenty of eyes on Microsoft this year. The corporation will be in the Business Center to discuss potential partnerships, while the conference is littered with talks about developing across Microsoft's various platforms.

MIXAMO
Booth 310, GDC Expo
Continuing to showcase its end-to-end character animation pipepline, Mixamo is looking to meet any potential customers that want to improve the way they create 3D characters, whether that's in games, animation or film.

NINTENDO
Booths BMR2732, 2738 & 2742, Business Center
Historically guarded when it comes to working with indie developers, Nintendo is now much more open to helping the newest games makers bring their titles to its platforms. The console giant will be particularly keen to discuss the opportunities afforded by the eShop.

OCULUS VR
Booth 1224, GDC Expo
Another chance to get hands-on with the most talked about technology in video games development. The pioneering virtual reality firm will bring along the latest prototypes of both the Rift and Gear VR, as well as hosting a series of talks on VR rendering, 3D spatialised audio and more.

PERFORCE
Booth 632, GDC Expo
The award-winning creator of version management and collaboration software will be in San Francisco to tell developers how its tools can help improve their efficiency. Established Perforce clients include Ubisoft, CCP, EA and ArenaNet.

POLLEN VC
Booth TTW06, Summit Tabletops
A venture capital firm dedicated to helping devs stand out in the competitive mobile games market, Pollen VC is keen to demonstrate to studios that they don't have to remortgage their houses to release a game. The firm is also hosting a talk on Tuesday, March 3rd.

RAD GAME TOOLS
Booth 724, GDC Expo
Best known for its Bink 2 video codec, middleware firm RAD Game Tools will be available to discuss its entire portfolio of products, which includes Oodle Network and Data Compression, the Telemetry profiler, animation suite Granny 3D, UI creator Iggy and the Miles Sound System 9.

SILICON STUDIO
Booth 316, GDC Expo
The Japanese developer and middleware firm will be showcasing the latest improvements to open source engine Paradox, post-processing tool Yebis and new rendering engine Mizuchi. *Head to page 54 to find out more.*

SIMPLYGON
Booth 410, GDC Expo
Tools creator Simplygon will not only be showing Game Developers Conference attendees its optimisation and level of detail middleware on the expo floor, it will also do so as part of the conference. Simplygon has partnered with Telltale and Platinum Games for talks on Wednesday and Thursday respectively.

SOFTLAYER TECHNOLOGIES
Booth 2024, GDC Expo
Owned by electronics giant IBM, SoftLayer specialises in integrating cloud computing into apps and handling the more complicated aspects of this technology on behalf of developers. Head over to their booth to find out how their services can help your game.

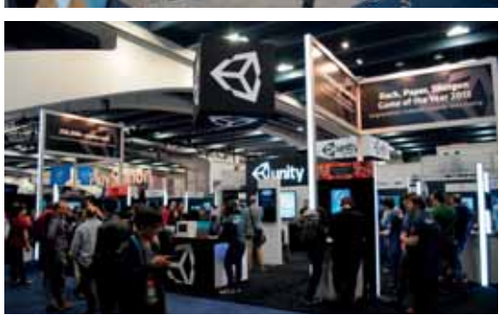
SONY COMPUTER ENTERTAINMENT AMERICA
Booth 1202, GDC Expo
Last year, PlayStation revealed Project Morpheus: its very own virtual reality headset. While the device is sure to be back on the expo floor, giving developers a chance to try out the device for themselves, there's bound to be a few more surprises from the platform holder.

SUMO DIGITAL
Booth PL3, GDC Play
One of the UK's most successful work-for-hire studios, Sumo Digital is heading to San Francisco fresh from the success of *LittleBigPlanet 3* and co-developing *Forza Horizon 2*. The company will be looking for new development opportunities.

UNITY TECHNOLOGIES
Booth 1402, GDC Expo
With Unity 5 on the way, expect plenty of news from one of the top game engines. As well as showcasing the latest titles to use its tech, Unity will also be hosting a developer day and press conference on Tuesday, March 3rd.

VALVE
Booths 1602 & 1702, GDC Expo
The mysterious PC developer and creator of Steam has promised it will have a larger-than-usual presence at GDC 2015, not only releasing more details on the long-awaited Steam Machines, but also teaming up with Unity, Epic, EA and Oxide to discuss the next generation of OpenGL.

VMC GAMES
Booth 731, GDC Expo
The QA firm will be on hand to discuss its comprehensive services, from in-house testing to global beta testing and localisation. VMC is keen to meet any publishers and devs who require support with their games.



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LEAD ARTIST - CHARACTER AND ANIMATION

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INDUSTRY EXCELLENCE AWARDS 2015

Time to celebrate your achievements

Once again, the annual Develop Awards will recognise the most creative and innovative talent from across the UK and Europe. Want to make sure you're in the running? Follow our handy guide to this year's awards

THE CATEGORIES 2015

CREATIVITY
New Games IP
Use of a Licence or IP
Visual Arts
Audio Accomplishment
Use of Narrative

TECH & SERVICES
Innovation
Tools Provider – Design & Creativity
Tools Provider – Production
Engine
Technical Services
QA & Localisation
[NEW] Outsourcer
Recruiter

STUDIO
Publishing Hero
Micro Studio
Independent Studio
In-House Studio
New Studio

SPECIAL AWARD
Studio of the Year
Development Legend

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FOUR STEPS TO WINNING A DEVELOP AWARD

STEP ONE: MAKE SURE YOU ARE ELIGIBLE

- The games in question must be released somewhere in the world between May 1st, 2014 and April 30th, 2015. And yes, commercial public beta phases are also eligible.
- Is your business based in Europe or the UK? If so, you are eligible – even if you have worked on games developed outside of the region.
- If you're based outside Europe, can you prove worthwhile support or collaboration with studios in the region over the past year? If so, you're eligible for selected categories (check the award description for details).

STEP TWO: PREPARE YOUR ENTRY

- Write a short pitch of 350 words
- Provide five bullet points highlighting any relevant features or accomplishments.
- Add a list of links to any videos, images, music, websites and so on that support your nomination.

STEP THREE: SEND IT IN

- Email your nominations to **developawards@nbmedia.com** before 5pm GMT on Tuesday, April 21st.

STEP FOUR: SIT BACK AND WAIT

When all nominations are in, they are each carefully appraised by the *Develop* editorial team. A shortlist for each award is drawn up based on the entry documents and industry standing.

Profiles of the shortlisted devs are then sent out to a panel made up of 100 industry judges hand-picked by the *Develop* team, who confidentially disclose their choices. The nominees with the most votes win in their award category. The names of the judges are only named after the event.

CREATIVITY

New Games IP

Who's eligible?
Any UK or European studio-made IP released for the first time in the last year, either as a boxed or downloadable product. New IPs should have introduced an original brand plus new gameplay aspects and/or original characters to consoles, portable devices or PC.

Previous Winners
2014: *Tearaway* (Media Molecule)
2013: *Clash of Clans* (Supercell)
2012: *Frozen Synapse* (Mode 7 Games)
2011: *Enslaved* (Ninja Theory)
2010: *Heavy Rain* (Quantic Dream)
2009: *LittleBigPlanet* (Media Molecule)
2008: *Lost Winds* (Frontier Developments)

Use of a Licence or IP

Who's eligible?
Any game released in the previous 12 months by a UK or European studio that is a proven quality title, but is based on an external property (licensed or otherwise) not owned or created by its developer.

Previous Winners
2014: *LEGO Marvel Super Heroes* (Traveller's Tales)
2013: *Angry Birds Star Wars* (Rovio)
2012: *Batman: Arkham City* (Rocksteady Studios)
2011: *F1 2010* (Codemasters Birmingham)
2010: *Batman: Arkham Asylum* (Rocksteady Studios)
2009: *LEGO Batman* (Traveller's Tales)
2008: *LEGO Indiana Jones* (Traveller's Tales)
2007: *LEGO Star Wars II* (Traveller's Tales)

Visual Arts

Who's eligible?
Any UK or European studio that has demonstrated impressive graphical and/or distinct, iconic design work in the games or gaming content it has produced and released during the past year.

Previous Winners
2014: Rockstar North (*Grand Theft Auto V*)
2013: Crytek (*Crysis 3*)
2012: Ubisoft Montpellier (*Rayman Origins*)
2011: Playdead (*Limbo*)
2010: Black Rock Studio (*Split/Second*)
2009: Media Molecule (*LittleBigPlanet*) [For Best Audio & Art]
2008: Rockstar North (*GTA IV*) [For Best Audio & Art]
2007: Rare (*Viva Piñata*) [For Best Audio & Art]

Audio Accomplishment

Who's eligible?
Any UK or European studio that has demonstrated pitch-perfect audio design, sound, or music creation in its games released during the past year. This refers to the audio design of the whole game. Use of licensed and original tracks can be taken into account.

Previous Winners
2014: EA DICE (*Battlefield 4*)
2013: Sony London Studio (*Wonderbook: Book of Spells*)
2012: EA DICE (*Battlefield 3*)
2011: Somethin' Else (*Papa Sangre*)
2010: FreeStyleGames (*DJ Hero*)
2009: Lionhead Studios (*Fable II*)
2008: Rockstar North (*Grand Theft Auto IV*)

Use of Narrative

Who's eligible?
Any game that has made clear efforts to balance storytelling and gameplay design, or experiment with how they are combined. Finalists will be those games that have successfully mixed narrative into the interactive experience. A project's specific writers will be credited where possible.

Previous Winners
2014: *Brothers: A Tale of Two Sons* (Starbreeze Studios)
2013: *Thomas Was Alone* (Mike Bithell)
2012: *Dear Esther* (The Chinese Room)

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TECH & SERVICES

Innovation

Who's eligible?
Any studio or company that has demonstrated impressive technical innovation in any aspect of games development or design. The award can be given to a specific tech, title or studio – provided it has been active/released as a new product in the last 12 months.

Previous Winners
2014: Oculus VR (Oculus Rift DK2)
2013: Oculus VR (Oculus Rift)
2012: Geomerics (Enlighten)
2011: Microsoft Research Cambridge (Kinect)
2010: Unity Technologies (Unity 3D)
2009: Media Molecule (*LittleBigPlanet*)
2008: NaturalMotion/Image Metrics (*GTA IV*)

Tools Provider – Design & Creativity

Who's eligible?
Any company, of any nationality, that has released middleware or tools that have enhanced or supported the work of UK or European games development teams in the past year. This award focuses on graphical, audio and other creative toolsets.

Previous Winners
2014: Maya LT (Autodesk)

Tools Provider – Production

Who's eligible?
Any company, of any nationality, that has released middleware or tools that has helped any UK or European games teams improve the efficiency and development in the past year. This award focuses on tools that aid with project management and releasing games on multiple platforms.

Previous Winners
2014: Perforce Software (Perforce)

Engine

Who's eligible?
This is an award for the best third-party engines. It's open to any engines, regardless of where it is made, that has enhanced the work of UK or European games development teams in the past year. Weight is given to new versions or significant upgrades.

Previous Winners
2014: Unity (Unity Technologies)
2013: Unreal Engine (Epic Games)
2012: Unity 3.5 (Unity Technologies)
2011: Unreal Engine 3 (Epic Games)
2010: Unreal Engine 3 (Epic Games)
2009: Unreal Engine 3 (Epic Games)

Technical Services

Who's eligible?
Any specialised external studio or company that has aided UK or European games development in a significant way. The award can be given to any firm that has helped with the production, monetisation or other aspect of the development process – providing the project in question has been active/released as a new product in the last 12 months.

Previous Winners
2014: Player Research
2013: Audiomotion
2012: VMC Game Labs
2011: Audiomotion
2010: Testology

QA & Localisation

Who's eligible?
This award, introduced last year, is open to any company that has contributed significantly to usability, test and translation of UK or European games and gaming content, providing these have been released or actively developed in the past 12 months.

Previous Winners
2014: Testology

[New] Outsourcer

Who's eligible?
Any creative outsourcer or work-for-hire studio that has provided assets for an individual project. This applies to businesses or individual external contractors that have helped produce, manage or directly generate the audio or visual material for games released in the last 12 months, or contributed to the game's development, e.g. porting or creating select sections of the game.

Recruiter

Who's eligible?
Any UK or European company working in the field of recruitment and human resources that has demonstrably served the needs and demands of the UK and/or European development community during the last 12 months.

Previous Winners
2014: OPM
2013: Amiqus
2012: Amiqus
2011: Specialmove
2010: Amiqus
2009: Amiqus
2008: OPM

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STUDIO

Publishing Hero

Who's eligible?
Any games publisher, developer, hardware manufacturer, platform holder or investor – from any country – that has supported UK and European games developers during the past year via the publishing, funding, distribution and/or co-development of new games.

Previous Winners
2014: SCE Strategic Content
2013: Kickstarter UK
2012: Valve
2011: Valve
2010: Channel 4
2009: Apple
2008: Nintendo

Micro Studio

Who's eligible?
Any UK or European games developer – consisting of an individual or small collective of people up to a maximum of ten at the time of nomination – who have had significant original output in the past year.

Previous Winners
2014: Vlambeer
2013: Fireproof Games
2012: The Chinese Room
2011: Mojang Specifications
2010: Hello Games

Independent Studio

Who's eligible?
Any UK or European games development company, staffed by 11 people or more, and which is not owned or managed by a publisher working on any available game platform. Applying studios should have had some significant output in the last year.

Previous Winners
2014: Bohemia Interactive
2013: Supercell
2012: CCP
2011: Crytek
2010: Quantic Dream
2009: Media Molecule
2008: Splash Damage

In-House Studio

Who's eligible?
Any UK or European publisher-owned games development company or in-house games development resource – including those acquired recently – with title(s) released for any games platform in the past year.

Previous Winners
2014: Rockstar North
2013: Boss Alien
2012: Creative Assembly
2011: Media Molecule
2010: Rocksteady Studios
2009: Rockstar North
2008: Rockstar North
2007: Ubisoft France

New Studio

Who's eligible?
Any new UK or European studio that has had its first game commercially released – either via retail or digital distribution – during the past 12 months. Companies do not need to have been founded during that period to qualify.

Previous Winners
2014: Space Ape Games
2013: Playground Games
2012: Bossa Studios
2011: Mojang Specifications
2010: Hello Games
2009: Media Molecule
2008: Doublesix
2007: Realtime Worlds

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SPECIAL AWARDS

Studio of the Year

Who's eligible?
This special award gives singular recognition to a studio that has produced outstanding work in the past 12 months, primarily though any retail or download games that have been released commercially in the past 12 months. It is open to any UK or European games development studio to enter and the winner will be selected by the *Develop* team.

Previous Winners
2014: Rockstar North

Development Legend

Who's eligible?
The winner of this award, especially chosen by the *Develop* team, is an individual who has made a significant impact on games development – in a commercial, creative or technological sense – during their lifetime and career. This award is open to games sector icons from around the world.

Previous Winners
2014: Mark Cerny
2013: Tim Sweeney & Mark Rein, Epic Games
2012: David Perry
2011: Ian Livingstone
2010: The Gower Brothers (Jagex)
2009: Phil Harrison

HAVE YOU FORGOTTEN ANYTHING?

HAVE YOU LOBBIED?
No? Then follow our easy four-step process detailed on page 29.

ARE YOU FREE ON WEDNESDAY, JULY 15TH?
If so, come on down: the Develop Awards will be held in the evening at the Brighton Hilton Metropole, during Develop: Brighton 2015.

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Single seat ticket prices are the same as last year, full prices after the early bird remain the same – or even cheaper in the case of the Gold Table deal.

Early bird prices, for those tickets or tables booked on or before Friday, June 12th, are:
- Gold Table of ten: £2,250 + VAT
- Standard Table of ten: £1,950 + VAT
- Single Seats: £195 + VAT.

From Friday, June 12th the prices change to:
- Gold Table of 10: £2,650 + VAT
- Standard Table of 10: £2,350 + VAT
- Single Seats: £235 + VAT.

Book your place?
To book your place at the event email **khumphrey@nbmedia.com**

Do you want to sponsor the Awards?
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Branching out: **The experiments of Reflections**

Ubisoft's little-known experimental UK team has just released its first commercial game: the acclaimed PC oddity Grow Home. **James Batchelor** spoke to the team to find out how breaking away from its usual remit of triple-A games helped the studio find a new path

REFLECTIONS, THE UBISOFT-OWNED UK studio, is not known for small games.

Most will know it for the popular *Driver* series, while in recent years it has contributed to and co-developed a number of its parent's triple-A blockbusters: *Watch Dogs*, *Far Cry 3*, *Tom Clancy's The Division* and the last four *Just Dance* games.

Which is why *Grow Home*, a cutesy PC game based around procedural generation and a botanically enthusiastic robot, is so striking as a new release. A title unlike anything the studio has produced before, the departure does not signify a dramatic change to Reflections' remit, but the first public outing for its best kept secret.

In its Newcastle HQ, away from the departments dedicated to triple-A projects with strict deadlines is a small team with a far looser purpose: experimentation. It searches for new game ideas that may or may not fit with everything else the studio is working on.

"The idea for the team really came about from wanting to challenge how we make games in Reflections," explains Pete Young, producer of *Grow Home*. "We've got a track record of developing massive triple-A games and a strong technical heritage. We created the opportunity to experiment on a smaller scale, with some very challenging constraints. The team itself is a mix of very experienced developers and bright new graduates, each with a broad range of skills but the ethos to help out in whatever way we can.

"Our motivation is to create genuinely different experiences. We are not interested in cloning other games; we want to create gameplay that players have not seen before. This is quite an explorative process and can be risky in development terms."

BUDDING CREATIVES

The creation of such a team is perhaps less surprising when you look at the wider family of Ubisoft studios. In recent years, the publisher has encouraged its most creative talent to branch out from their day-to-day tasks, rewarding key members with the chance to embark on personal projects once their main games are completed.

Far Cry 3 creative director Patrick Plourde, for example, was able to devote time to RPG *Child of Light*, while other Ubisoft experiments have resulted in the touching *Valiant Hearts* and neon-lit mayhem of *Far Cry 3: Blood Dragon*.

Reflections' experimental team has already garnered comparison with these games following the launch of *Grow Home* – something Young is more than happy with.

"We're loving the parallels people are drawing with *Valiant Hearts* and *Child of Light*; they're both fantastic games," he says. "However, *Grow Home* is also very different from those experiences. Both of those are still small team developments by Ubisoft standards, but the our team is even smaller."

In fact, *Grow Home* was developed by just eight people; a mix of junior and senior members with plenty of experience with triple-A development. Three were programmers, Young was producer, and they were joined by one artist, one game designer and one audio designer.

Grow Home star BUD was one of a number of character models built during the early demos of the game that eventually caught on thanks to its charm and personality

"Keeping the team this small helped us stay focused, move quickly and make sure we found creative solutions to our problems, rather than just throwing more people at it," he said.

He adds that the team's experiments are based around more than just "blue sky" research into new gameplay possibilities. Instead, Young's division constantly works with the mindset of treating each prototype as if it could become a commercial product.

"The goal for us is to keep innovating, keep trying different approaches to gameplay and technology, but we do that in a product shell," he says. "Research and development is great, but there is a fantastic focus that comes when you bear in mind how you will make and ship a game from it.

> ***"Keeping the team small helped us make sure we found creative solutions to our problems."***
>
> Pete Young, Reflections

"*Grow Home* is the start for us. We want to prove that the approach we're taking successfully positions Reflections as a studio that does more than make great triple-A games – it also innovates and experiments."

PLANTING THE SEED

So how does a team most experienced in vehicle-based action game and motion-controlled dance titles stumble upon a concept as inventive as that of *Grow Home*?

Young says the experimental team began by playing around with the possibilities afforded by procedural generation and animation. In one of its early demos, one of the character models started to take on more shape and significance in the developers' minds.

"One of the toys we created had a charm and personality, a real character coming from its movement that many people connected with," he says. "They enjoyed how they could influence and guide it around the test environment, while feeling there was some personality coming in from the avatar itself.

"We developed this character into BUD, the robot in our game. Players love that the robot can climb and they are able to control his hands individually. It's a really interesting and different experience."

In fact, BUD's ability to climb and the nature of using this to move around the level was so enjoyable, it became another central pillar of the prototype that would evolve into *Grow Home*. Young recalls the team was particularly intrigued by the freedom to explore a game world vertically.

"For once, we didn't have to level design specific routes that a player could climb on," he says. "You could climb anywhere, and that was both liberating and challenging. We set out trying to think of an exciting and dynamic environment that would make the most of the climbing freedom, and this is where the Star Plant idea first took seed.

"Being able to control how this giant plant grew and what form it would take was a revelation to us; we felt that, as a player, you were creating your own vertical playground as you went."

Grow Home's focus on guiding the Star Plant in any direction you choose is a far cry from how the title started out. In September, *Develop* visited Reflections and played a very different prototype in which players used a then-unnamed BUD to climb an endless, procedurally generated rock formation.

The addition of rising water levels added a tension that is absent from the final product, as you frantically attempted to climb as high as possible. The experimental team tested the concept not only on their Reflections colleagues, but also on other Ubisoft studios as well.

"That prototype was an exploratory mini-game we developed very early on," Young explains. "We were interested in seeing how the climbing mechanic felt with

Above: Grow Home's vibrant colour palette stemmed from the childlike nature of the game's protgaonist, BUD

Below right: The Grow Home development team

the player under time pressure. It was surprisingly popular internally – we set up a global leaderboard tracking the highest players in each studio, which kicked off some great competition. The team at Massive Entertainment got really competitive on this, but the top spot ended up going to one of the line designers at head office.

"But what we learned was that the climbing was more enjoyable when you could take it at your own pace and really use it to explore the world in whatever way you choose. *Grow Home* is just that: the world and the challenge are set out before you and you can decide which way you want to tackle it and how fast you go."

> ***"It's been an illuminating experience for us and one that could benefit any triple-A studio."***
>
> Pete Young, Reflections

With the mechanics in place, the experimental team also had to refine the visuals. While the prototype bore a similar style to the finished game, colour has injected new life into the its appearance and made it stand apart from anything the Newcastle studio has produced before. Again, the solution came from the loveable BUD.

"His character movement is very childlike, playful and naïve, so we needed a tone and art direction to match," explains Young. "This led us to investigate simple, geometric shapes and bright colours. Another consideration was our tiny team size and tight schedule, so we needed a style that was very fast to work with.

"We were inspired by origami designs, paper cut-out and collage styles and especially the recent wave of 'low poly' digital illustrators whose work was a real inspiration. This is how we developed a striking-looking game that we were able to produce in a few short months with our one-man art team."

TALENT BLOSSOMS

With such a small team, you would think experiments would take shape slowly, but Young reports that the final build of *Grow Home* came together a lot quicker than you might expect. His crew had already been trying out procedural animation, but it was in June that they first hit upon the idea of the Star Plant. With *Grow Home* launching globally the following February, it took just eight months to create a final commercial product.

Thinking about games design differently even prompted the experimental team to try new ways of pitching games to their superiors.

"Ubisoft has more than 9,000 team members, so we decided to launch the game internally to all teams worldwide," says Young. "The feedback we got was amazing – they loved it. This made a lot of noise internally, spreading virally to the point that we were given the opportunity to develop it for release externally."

And so *Grow Home* found its home on Steam. It was a pivotal moment for both Reflections and its experimental team: proof that setting aside a few members of the team could benefit the studio as a whole.

Ubisoft already encourages personal projects and experimentation, but Young urges other triple-A developers to consider a similar strategy.

"It's been an extremely illuminating experience for us and one which could benefit any triple-A studio," he says. "Having small, highly agile projects enables you take risks and be explorative with your whole approach to development." ■

Interface

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Auro TECHNOLOGIES

Horror in the making

The Alien: Isolation gamble

35 years after the original film, Creative Assembly has made Alien terrifying again. **Craig Chapple** speaks to creative lead Alistair Hope about recreating the perfect organism for games

The *Alien* franchise has taken some hits over the years.

The average to poor reviews and early controversy surrounding Gearbox's *Aliens: Colonial Marines*, the confusing prequel-but-not-a-prequel *Prometheus*, the *Alien vs. Predator* films and the ill-fated *Alien: Resurrection* have arguably damaged and made light of an IP and horror icon that was created to instil fear. It was, after all, "the perfect organism".

And so arrived *Alien: Isolation* in 2014, Creative Assembly's gamble on taking the franchise back to its roots of Ridley Scott's 1979 original horror, *Alien*, but this time in games. Moving away from the guns and bullet sponge Aliens that have appeared in every game based on the IP – as well as a departure from the studio's own strategy and sports roots – Creative Assembly was both stepping into uncharted territory while also looking to the past for inspiration and the franchise's rebirth.

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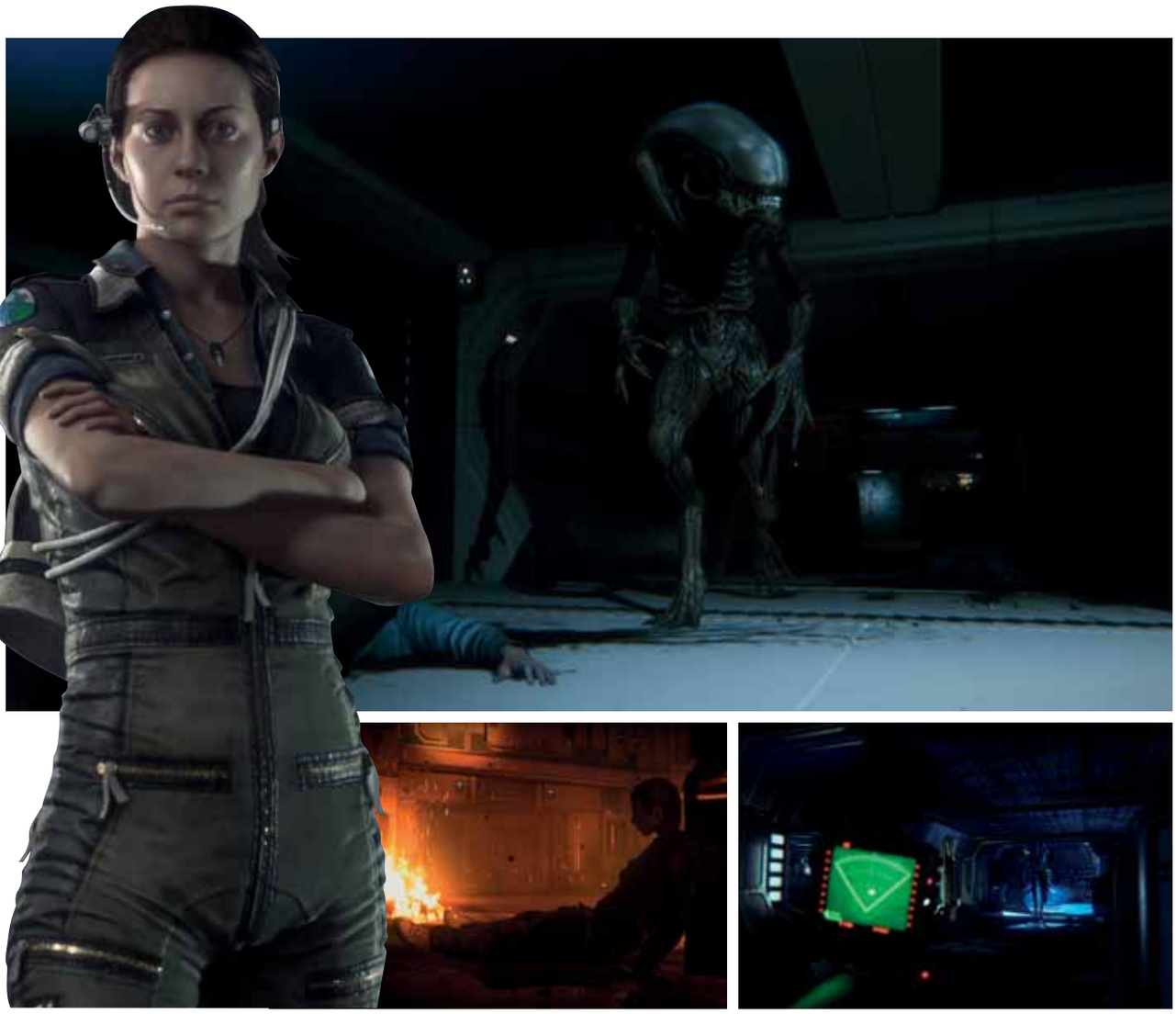
Imagination



Alien: Isolation creative lead Alistair Hope (above) says the Alien's AI ensures the creature remains unpredictable and terrifying throughout

But what drove the Horsham-based developer to take such a risk?

"It was a little bit born out of seeing the other games that have been made based in that universe, which have always been focused on the James Cameron experience: marines, the pulse rifles and lots and lots of Aliens," explains *Alien: Isolation* creative lead Alistair Hope, a long-time Creative Assembly employee – its eighth hire in fact.

"And that's a cool experience, but it felt like there was an amazing opportunity to create a game that took you back to that feeling of being on the Nostromo, being hunted by just one Alien.

"And I guess we were in a really fortunate position. I knew Sega had the licence to make games based in the Alien universe, and it was a once in a lifetime, now or never opportunity to pitch an idea."

THE BITCH IS BACK

For the pitch, a small team spent four weeks putting together a technical demo to show off their ideas in what Hope describes as a "mood piece". The demo involved the player working down a corridor, where they would pass a recreated medical lab from the first film, and then onto another area seemingly torn apart by the Alien's presence. It then ended with the Alien confronting the player.

"It felt like nothing else we'd seen before in that universe," he says. "You had the sense there was nowhere to run, there's no guns, you've got to respect this thing."

Hope adds the pitch ended with a sudden silence, followed by the thumbs up for the concept. He says he hopes to one day release the technical demo to the public, to show how close the final product was to the team's initial vision.

Despite venturing into new territory with a first-person horror game, away from the studio's roots in *Total War* and sports, the developer has gained numerous positive reviews of its title and it has achieved over one million sales to date.

> ***"I knew Sega had the licence, and it was a once in a lifetime opportunity to pitch an idea."***
>
> Alistair Hope, Creative Assembly

Hope says it can be easy to get pigeon-holed, and though to outsiders it may seem like a strange departure of genre, internally there are lots of shared values from its past.

"Authenticity is an important thing to the studio," he explains. "Whether that's *Total War* and recreation of historical reality or the *A:I* team trying to recreate a feel, look and an immersive experience based on a film, there's a lot of crossover there."

After getting the greenlight, Creative Assembly was given unprecedented access to the enormous archives from the original *Alien* film by 20th Century Fox.

BUILDING BETTER WORLDS

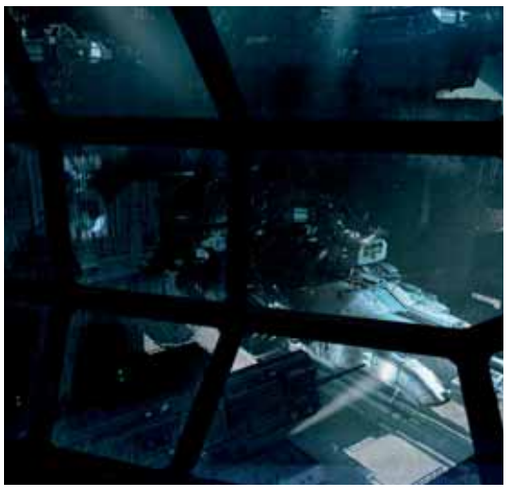
The goldmine included three terabytes of behind the scenes photos, videos and assets of the movie. As a fan, Hope says it was an unbelievable moment, and describes it akin to the suitcase in *Pulp Fiction*, the contents of which shines a glowing light when opened.

"That was so useful and they were very supportive," he says. "And it was a real honour to be given the opportunity to create a new story and expand on the original."

With such detailed information from the archives of 20th Century Fox on how the film crew crafted the sets of the Nostromo's interior, Creative Assembly went about closely recreating the movie's aesthetic on the Sevastopol, including the '70s vision of the future and the famous, clunky lo-fi tech.

"So many of our values came from that first film," says Hope. "It's beautiful. The production design is incredible; it feels really unique. It's this fantastic snapshot of the '70s and of the imagined future of that decade. I think it's really been genre-defining in its legacy. You can look at Duncan Jones' *Moon* and you can see the massive influence there."

Hope says the recreation of this mundane, downplayed yet advanced technology fed into the game's horror. By not going for the more mysterious and hi-tech approach of *Prometheus* and adopting the original *Alien*'s take, it was able to tell players in an instant



The tense atmosphere and lo-fi setting of the Sevastopol (far left) recreates the aesthetic of the Nostromo in the original film (left)

that, through this clunky, seemingly more realistic and grounded take on technology, there was no secret technology or weapon that would save them. Instead, players would have to rely on their instincts, which is something Hope says we can all relate to.

"It's about believability," he states. "It's about you buying into it. If it's too out there, it kind of breaks the illusion."

IN SPACE, NO ONE CAN HEAR YOU SCREAM

As well as giving players a sense of the world through their visual senses, one of the key aspects of developing the tense horror atmosphere was the audio, which Hope describes as "half the experience".

"It really is the shortcut to your brain," he says. "No matter what we're putting on-screen, we can really influence what you're feeling and thinking just through sound. That was a really important tool for us to manipulate the player and the experience."

Play through the game and you can often hear distant sounds or scuttling in the vents, unnerving the player and often causing them to take out the motion tracker to ensure they are safe from the Alien's presence.

The team took great lengths to make sound a key aspect of the Alien's interactions with the player. The slippery noise of the creature leaving a vent and a loud hiss that echoes around the corridors warn the player of its presence, while other sound cues alert the player to its intentions.

A gut-wrenching scream and loud, heavy fast-running footsteps tell you the game is up, you've been discovered, while slow but audible breathing as you go past an open vent in the ceiling will tell you the Alien is waiting for you should you cross its path.

As Hope says, audio can give a heightened sense of danger for events off-screen, as well as those on-screen.

"Sound is a massive part of any horror experience," he says. "We had to absolutely support the creature and the sense that you're never safe. Even if it's not on-screen, then you know you might be able to hear it. And what does that mean? How are you feeling about that?

"That was an early test we did. We had a very small space and the player just had to get from A to B, but there was an Alien in the way. The feedback we'd get was 'I was really scared when I could see the Alien because I knew it was nearby and I was in immediate danger'. But then we had the feedback from the same people saying they were equally scared when they didn't know where the Alien was and couldn't see it.

"And that was really interesting because in the film it's not on-screen the whole time, but when it does appear it's really meaningful and impactful.

"I guess that was again one of the things we wanted to do was to re-Alien the Alien, really give it back its credibility and its position as the ultimate killer, and something you have to respect and take seriously. It wasn't just a bullet sponge at the end of your gun."

One example of the way this sense of fear was achieved through sound, Hope explains, was how the team dynamically mixed sound in real-time. Depending on a certain set of circumstances and parameters, if the Alien approached the player, environmental sounds would often be lowered while the sound of the Alien and the player's movements would increase.

> ***"Sound is a shortcut to your brain. Whatever's on-screen, we can influence what you're feeling."***
>
> Alistair Hope, Creative Assembly

"The perception there is you're actually much closer than you are, but it's actually brilliant because it moves the focus of the player," he explains. "You're paying attention more or less solely to the Alien.

"It's kind of interesting because you can be in a room with an alarm going off, but you're focused on the Alien. So when we reduce the volume of the alarm, you're not suddenly thinking, hang on, there was an alarm in here, what's going on? The Alien is holding your attention so much that we can really start to play with those elements."

THE PERFECT ORGANISM

Perhaps the most innovative element of *Alien: Isolation*, and its key selling point, is the Alien's AI.

Its unpredictable nature can make it purposely difficult to prepare for its arrival, which could come at any moment – however inopportune that moment may be. And unlike many stealth games, predicting its movements is impossible. Here is where the game really echoes the tension of Ridley Scott's *Alien*, where the crew is being hunted, rather than the player taking on gaming's traditional role of the hunter.

Hope says the realisation that the Alien needed to feel more sentient rather than scripted came early on in development, with the creature driven by its environment and what's happening around it, rather than being put on a set path.

"I think that's the interesting journey," he says. "You start by going yeah, I want to make this game that really feels like *Alien*, and then you realise, how are we going to do that?

"I think there was the realisation early on that if you scripted everything and you could predict what was going to happen then it wouldn't really be scary. You'd just be on this kind of carnival ride where you could always predict that when you went down this corridor, the Alien would go left and you could go right, and that would break everything.

"And so there was this sense that you'd have to let the Alien use its own senses to drive its behaviour, to help it navigate. I think that was the right choice, and that's the kind of magic for me of the game, is that everyone – now over a million people – got a slightly different story to tell as to how they survived it.

"One person can go to a certain space and have a completely different experience to another person, and they all in a large part depend on the choices the player makes. That's the magic of the game, and possibly the magic of games full stop; having the player have that role, make that difference and have that experience."

Though a gamble, Creative Assembly's risk-taking with *Alien: Isolation*, while harnessing the studio's expertise of recreating history by mimicking the original *Alien* film's aesthetic and atmosphere, has arguably paid off. The use of visuals, audio and the unique AI of the Alien has brought something new to the horror genre which others make look to adapt to their own titles in future. And Hope says the team is grateful for the positive reception to the game, and is proud of the team's work.

"It started from an idea and then a couple of years later we're winning game of the year awards and people seem to really appreciate what we've done," he says.

"I think it's quite a personal game, so we're immensely proud of what we put together. It's a very special game to us." ■

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#DEVELOPJOBS

Your monthly guide to the best career opportunities in games development worldwide

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A peek inside Studio Gobo's digs in Hove

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RECRUITER HOT SEAT

Bigpoint's senior recruiter on what the firm looks for in new staff

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SKILLS AND TRAINING

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Getting a place on a video games university course

University of Staffordshire games lecturer David Edwards tells **Develop** about what students need to get onto its various games courses for aspiring developers

by Alex Calvin

VIDEO GAMES DEVELOPMENT is a tantalising area of the industry to get involved in, and going to university to study programming, design or any manner of disciplines is a great place to start your career.

The University of Staffordshire is one of the many establishments in the UK with courses pertaining to games. It has six courses, including schemes for games concept design, programming and art.

But how does one go about applying to these courses?

"The biggest thing is to just have a passion for games," lecturer David Edwards tells *Develop*.

"Know you want to go into the games industry, know you want to work for games companies. You want to take that step where you go through the monitor and say you want to produce content for other people to play.

> ***"If you're applying to a course that requires a portfolio, use your best work."***
>
> David Edwards, UoS

"That'll get you through a huge part of your course. Having a passion will get you through those late-night deadline crunches."

Edwards adds that another side of this process is practice. He advises students to embed themselves in games and get invested in producing the work they want to do.

"For someone applying, it would be a case of playing lots of different types of games and then working out how they work, what makes them fun, what makes them enjoyable, what makes *GTA* a billion-dollar franchise and what's so great about

some of the Naughty Dog games," he continues. "Then when you know what you want to do, your passion and drive will get you there. In practice, it's getting Unreal Engine and having a play with it. When you get to university, we can help you do the rest."

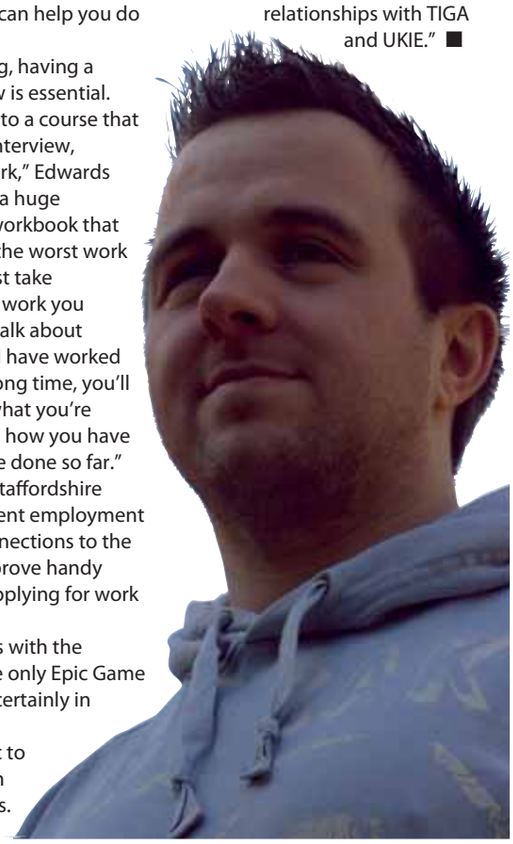
And when applying, having a body of work to show is essential.

"If you're applying to a course that requires a portfolio interview, present your best work," Edwards explains. "Don't take a huge portfolio, or a giant workbook that will include some of the worst work you've ever done. Just take examples of the best work you have and be able to talk about them. Odds are you'll have worked on the project for a long time, you'll be able to describe what you're trying to achieve and how you have achieved what you've done so far."

The University of Staffordshire itself has a 67.4 per cent employment rate thanks to its connections to the industry. And these prove handy when students are applying for work experience roles.

"We have close ties with the industry; we have the only Epic Game Centre in the world, certainly in Europe, and that's a partnership with Epic to deliver their events in the UK," Edwards says.

"That's where the industry come in and run events, they have talks here. We've had the likes of Ninja Theory and Codemasters come and give talks, and we have access to placements because of our relationships with TIGA and UKIE." ■



MOVERS AND SHAKERS

This month: The Foundry, Storm8, Sumo Digital, InnoGames and Creative Skillset

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THE FOUNDRY NAMES JON WADELTON AS CTO

THE FOUNDRY ■ The software developer has appointed **JON WADELTON** as its chief technology officer and head of media production.

Wadelton is best known for his role in the development of Nuke, a node-based VFX, editorial and finishing studio. He played a key part in its creation, bringing Nuke, Nuke X and Nuke Studio to market under the umbrella of Nuke 9.

In his new position, he will be responsible for overseeing technology and research for the entire company.

"Jon has an uncanny ability to see emerging technologies and trends and apply them in ways that anticipate the increasingly sophisticated and complex needs of our customers," said The Foundry CEO Bill Collis.

"In his new role, Jon will now do that at a management-level, taking a long-term look at our technology development across media production and design, as well as emerging growth areas like 3D printing." ■

> ***"Jon will take a long-term look at our tech development across media production and design."***
>
> Bill Collis, The Foundry

STORM8 ■ Mobile developer Storm8 has hired **PABLO PANIAGUA** as head of product.

Paniagua joins from rival social and mobile company Zynga, where he was vice president of product. There he led product on multiple titles, including its flagship game *CityVille*.

"Storm8 is entering a new stage of growth in 2015, and we're aggressively hiring to support expansion," said Storm8 CEO Perry Tam. "Pablo is one of the strongest technology product leaders today, and his platform and games experience made him the natural choice to lead our product team as we continue to scale Storm8's network."

INNOGAMES ■ Ex-chief financial officer **ARMIN BUSEN** has become the new chief product officer at online online and mobile games publisher InnoGames.

In this new role, he will be responsible for the production of games in development, as well as the product management of live titles.

"Armin proved his outstanding analytical skills in his previous position and has profound knowledge about the international gaming market," said InnoGames CEO Hendrik Klindworth.

"This makes him the perfect choice to lift our gaming development to the next level."

SUMO DIGITAL ■ Sheffield-based independent studio Sumo Digital has appointed **KEN BEATY** as its chairman following a management buyout from previous owners Foundation 9.

Beaty's background is in private equity, and has held a number of high profile board positions at the likes of High Street fashion retailer Hobbs and cycling brand Planet X.

"The backing from NorthEdge has helped us to strengthen our position in the market and Ken's experience will add tremendous value at an exciting time for the business," said Carl Cavers, CEO at Sumo Digital.

CREATIVE SKILLSET ■ **IAN LIVINGSTONE CBE** has joined the Board of Patrons at Creative Skillset.

The board advises the creative industries skills body and helps promote the skills agenda in the UK.

"Ian's unrivalled expertise and knowledge of the games industry, new media and the wider Creative Industries will be a massive boost to help our Patrons drive forward our work supporting training and skills," said Creative Skillset Patrons chair Clive Jones CBE.

Livingstone added: "It is a great honour to become a Patron of Creative Skillset."

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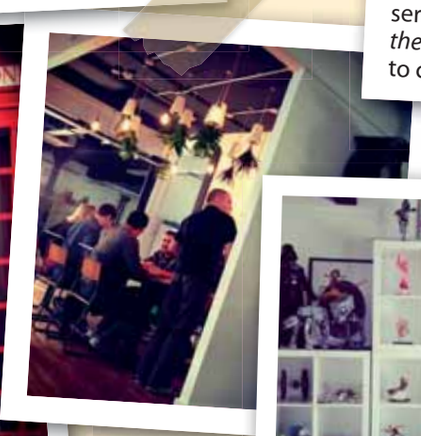
STUDIO GOBO

Hove, United Kingdom
www.studiogobo.com

Hove-based Studio Gobo houses 40 developers. The team has worked on playsets for the *Disney Infinity* series such as the *Guardians of the Galaxy* and *Pirates of the Caribbean* playset. On a Friday the team hires a chef to come in and cook lunch, which they eat as a team.



RECRUITER HOT SEAT

Bigpoint senior recruiter Felix Hock explains what the developer looks for when hiring new staff

What differentiates your studio from other developers?
Bigpoint is Europe's free-to-play expert with development hubs in Germany in Hamburg and Berlin. We recently restarted developing for mobile platforms with a dedicated studio in Lyon, France, as well as in our Hamburg Headquarters.

Our portfolio includes all-time favorites like *Battlestar Galactica Online*, *DarkOrbit Reloaded*, and *Farmerama*, in addition to rising stars like *Shards of War* or the upcoming *Game of Thrones*.

A passion for games is what connects all teams in all genres and platforms. It is more important for us to have a convincing idea, than to follow a certain protocol. Actually, each member of our development teams has a voice when it comes to defining our live games or discussing the direction a prototype should take.

Innovation counts when it comes to developing highly accessible and purely fun games for a global audience.

How many staff are you looking to take on?
We currently have over 50 open positions and are eager to hire high calibre experts, particularly for development and game design. This includes opens producer positions, as well as a design director.

What perks are available to people working at your studio?
At Bigpoint, you have the opportunity to work with a number of international professionals, the quality of whom you wouldn't be able to meet at many studios. All of our employees enjoy trust-based working hours. Aside from regular language and relevant professional training, we offer all kinds of entertainment, regular get-togethers after work, and a variety of sports programs at our offices. Employees at our German studios benefit from the employer-supported health insurance in Germany.

What should aspiring devs do with their CV to get an interview?
Very simple: keep it focused on the advertised position. The CV makes absolutely clear why you are the perfect fit. Show us your extraordinary skillset as well as your passion for the gaming industry. Provide tangible examples in the form of code and online references of your previous work. Private projects are also very welcome.

In the end, personality is relevant with regard to the best fit to a team and the spirit here at Bigpoint.

Who is the best interviewee you have ever had and how did they impress you?
My best interview was with a developer who really impressed me with his broad range of skills and the impressive number of remarkable titles he had shipped. He came to us with a bunch of ideas he was very keen to realise. At the same time, he was very open-minded and instantly connected with the team.

What advice would you give for a successful interview?
Be open and use the chance to inform yourself and the range of opportunities we offer. We are looking for nothing less than real passion for gaming and a willingness to enter the next level of gaming.

Why should developers join you when indie and self-publishing have become more accessible?
We have profound knowledge to sustainably run free-to-play online games. Our marketing capacities allow us to roll out to more than 1,000 partners and a variety of channels to reach a global audience. These are success factors that indies don't possess.

Being part of Bigpoint means more. You´ll work in a professional, yet familiar work environment and meet great people everyday. Knowledge is no secret here and it is being shared between the teams.

In the end, it's just nicer and much more inspiring to work in one of our teams than alone or in a very small team.

If you have recruited internationally, what is the process like?
After we´ve qualified a promising candidate via Skype, we invite him or her to our studio to give them the opportunity to get to know how it feels to work at Bigpoint. All new colleagues receive professional support – e.g. for their Visa – by our onboarding team. We provide a temporary flat for the first few months as well as a problem-solving team that assists employees from overseas with the bureaucratic issues, when relocating to Germany or France.

How have your recruitment needs changed at your studio?
At first, we hired everyone who was interested, in order to compensate for the rapid growth in the first years. Now, our recruitment strategy is very focused according to the needs of the company in terms of knowledge, experience, and personality. ■

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GET THAT JOB

Development specialists offer advice on how you can bag that career leap

THIS MONTH: TECHNICAL DIRECTOR

What is your job role?
My role is technical director. I oversee the programming team and steer the technical discussions and decisions to ensure that we are always finding the most appropriate solutions for our technical challenges. We need to make sure we are choosing the correct solutions for the studio and not 're-inventing the wheel' every time we start a new project.

What qualifications and experience do you need?
A degree in computer science or games development is a good start. However, it is only a start.

The games industry is constantly changing, so you need to keep abreast of all new technologies. Look at new tools, install interesting middleware and then experiment with them. The ability to author documentation and communicate your ideas clearly is also very important.

How would someone become a technical director?
The best route is to follow a programming path – junior, senior, lead – and make sure you get involved in all areas of programming, such as audio, rendering, AI, gameplay, input, tools etcetera. This will stand you in good stead when you have to make key decisions in those areas.

> ***"You really need to stand out. All candidates must demonstrate clean code."***
>
> Derek Pettigrew, Strawdog

What do you look for when recruiting a new programmer?
The graduates that we've seen recently tend to come with very similar looking demos. We're looking for something more than coursework: pet projects, and so on. You really need to stand out from your peers.

All candidates must be able to demonstrate clean and tidy code (with no spelling mistakes), and a real passion for what they have created.

What opportunities are there for career progression?
Technical director progression is possibly more limited once you've reached that level. Possible moves would be to other senior management positions, or perhaps starting a completely new business.

Why follow a career in your field?
The technical challenge. The industry is ever-evolving and there are always new avenues to explore and technologies to master. Just when you think you've got it all covered, something new arrives. ■

If you've got job advice to share, email **acalvin@nbmedia.com**

Diaries from **ALACRITY FALMOUTH**
Innovations in Incubation

Accelerating your ambition

Alacrity Falmouth participant Evtim Gruev reflects on his own experience during the first half of the incubation initiative

BUILDING YOUR OWN business from a single idea is just as hard as it is exciting. This is how I see my journey on the Alacrity Falmouth programme.

Having passed the halfway point, I now look back and realise the scale of what we have achieved. The entire studio now looks and feels as if we have been working for years – yet it was no more than seven months ago when we first met. Now we can help each other, share our vision and inspire others to pursue their goals.

The product my team picked is innovative, and the opportunity to work with cutting edge technology is challenging yet rewarding. The pressure is immense as possibilities are only limited by imagination. But a realistic business approach has to be present in order to keep it all together.

This is where that MA in entrepreneurship comes in. Combining a methodical approach towards the building blocks of our business with innovative thinking and programming is what this programme is all about.

Fortunately, we have all the support we could hope for. Mentors and investors come in everyday to offer us support, to share new ideas and propose new solutions.

At this point in the project, I have been looking into the financial figures that will soon be required for our investment pitches. This is a completely new research field for me and seemed overwhelming at first. But having all the other teams and our mentors allowed me to dive into this unknown area without feeling pressured.

As our product is hitting a new market, we now have to make numerous choices with an unknown outcome. The final months of the programme are near and the pressure is escalating. Looking for our future office and building the product at the same time does not make our work easier.

Despite the high goal that we've set for ourselves, I am sure that the Alacrity Falmouth programme made the entire process much easier. ■

falmouth.ac.uk/alacrity-falmouth

SKILLS AND TRAINING

This month: University of the West Of England

Computer Science and Creative Technologies,
UWE,
Coldharbour Lane,
Bristol, BS16 1QY

T: 0117 328 5513
E: carina.mclane@uwe.ac.uk
W: www.uwegames.com

THE UNIVERSITY OF the West of England's BSc Games Technology (Hons) course focuses on technical design and programming aspects of games development, and has been running since 2006.

Graduates have gone on to get jobs at UK studios such as Rockstar North, Frontier, Lionhead and Sony Computer Entertainment Europe, as well as local developers including Opposable Games and Mobile Pie.

The core teaching team all have games industry experience at both triple-A and indie developers, and have helped craft a course that blends computer science, industry process, technical design and advanced technology with a core of C++.

The Games Technology course blends computer science, industry process, technical design and advanced technology

> ***"Our final year modules provide opportunities to develop specialisms in their chosen fields."***
>
> Carina Mclane, UWE

Students also get the chance to explore industry-standard tools and environments, from rapid cross-platform and platform-specific development to low level graphics, physics and multi-core programming.

"Games labs are 24-hour access and offer access to the usual industry standard software such as Unity, Unreal Engine 4, Autodesk and so on," says BSc Games Technology programme leader Carina Mclane.

"We have always provided specialist or custom platforms to challenge our students – from JAMMA arcade machine hardware through to Leap, Oculus DK2s, Falcon Haptics – and our status as a Sony Academic Partner for PS Vita development.

"Our Dissertation and Advanced Technology for Games modules in the final year provide opportunities to develop specialisms, this year including Android haptics and multi-touch, integration of custom peripherals in UE4, and more."

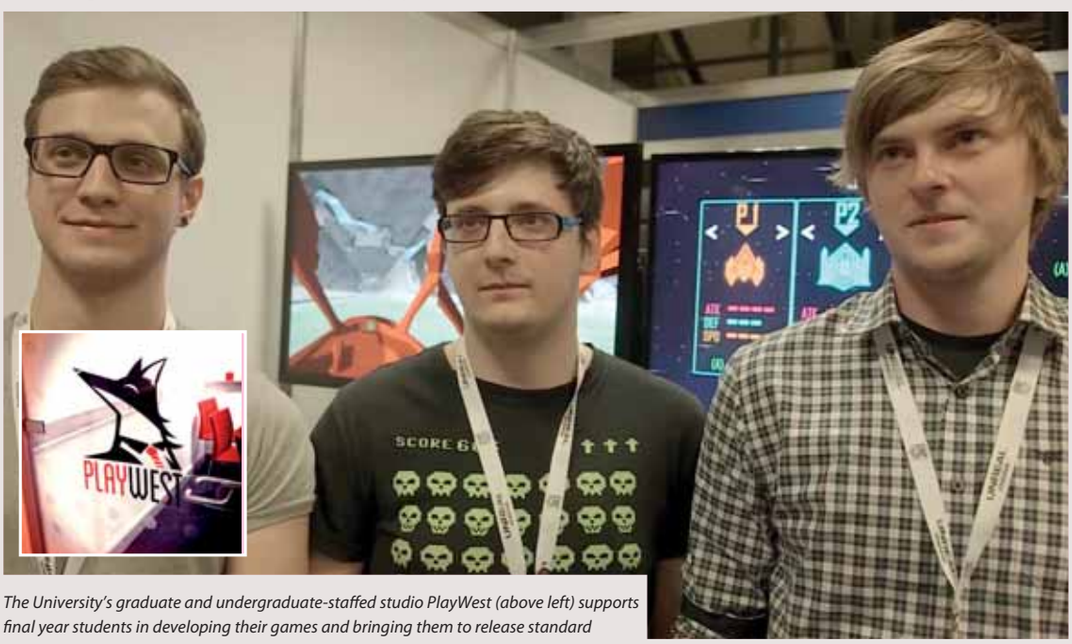
Mclane says that the course is "fully tailored" to games development, with students working on full games in each year of their studies, culminating in the commercial development module in the final year where groups of students work on a title all the way from the pitch to release candidate. The best teams from this process then win a chance to show off their games at the Develop Conference.

Winners also get backing from the University's graduate and undergraduate-staffed game studio toward release. Called PlayWest, it currently employs six final year student interns and two graduates who are paid to develop games.

"We are looking to grow this further to support placement students, and help connect those wishing to spin out their companies," says Mclane.

"We also promote involvement in games jams to boost portfolios through the UWE Game Jam Society, and events such as the Global Game Jam, hosted on-site and in conjunction with the Bristol Games Hub."

As well as a variety of tools open to students and its own studio in PlayWest, UWE also has links with local games companies, such as Opposable Games and Mobile Pie, who have employed a number of graduates in the past and contributed to course content. ■



The University's graduate and undergraduate-staffed studio PlayWest (above left) supports final year students in developing their games and bringing them to release standard

INFO

Courses: BSc Games Technology (Hons)

Country: United Kingdom

Staff: **Andy King** (Cluster Leader, Creative Technologies & Studio Director, PlayWest), **Carina Mclane** (Business Development Manager & Programme Leader, Games Technology), **Simon Scarle** (Senior Lecturer, Games Technology), **Lloyd Savickas** (Senior Lecturer, Games Technology), **Alastair Callum** (Lead Developer, PlayWest)

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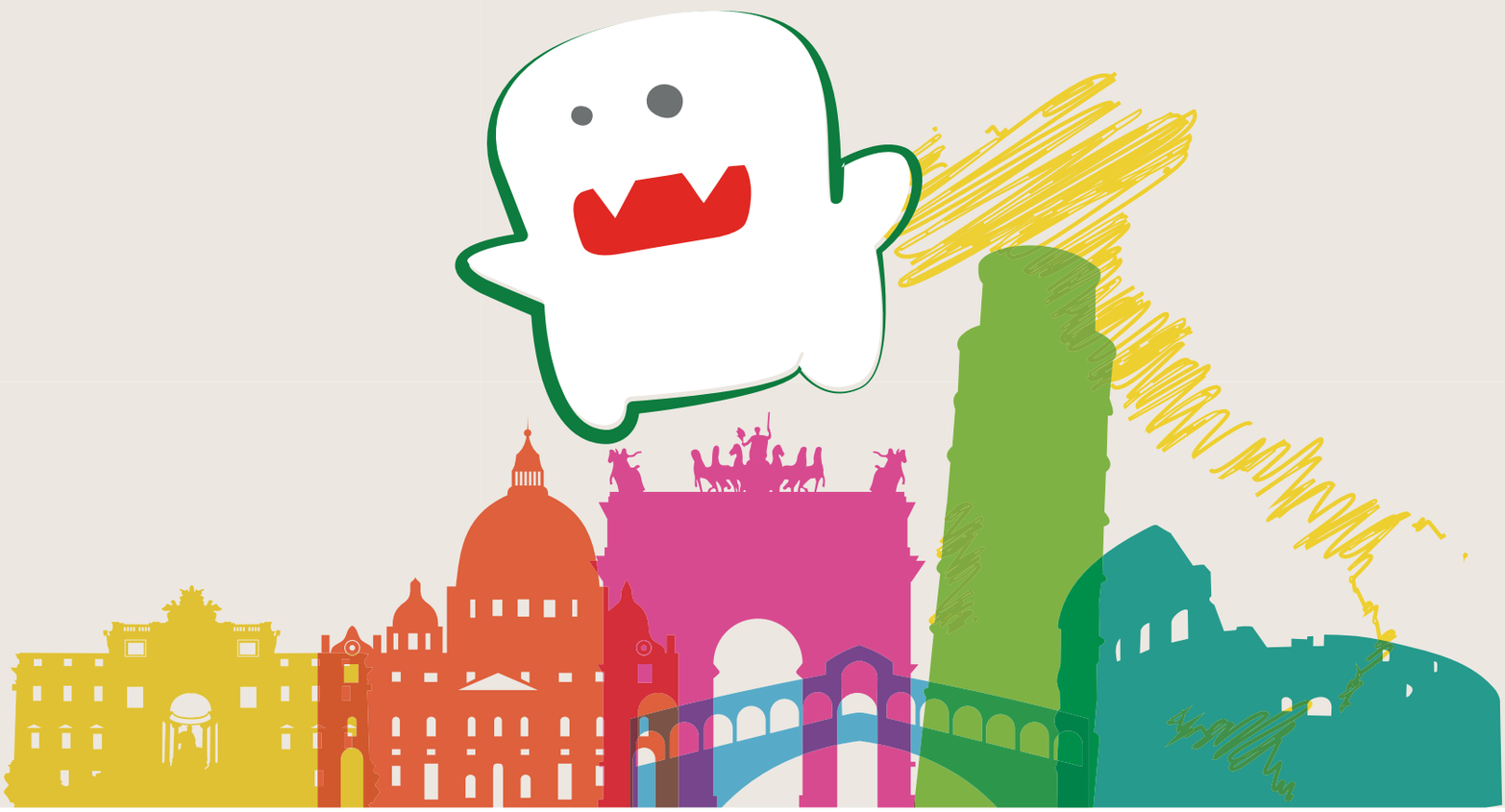

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The road to photorealism with Unreal Engine 4
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An engine for all

Building an open-source engine wasn't enough for Tag Games. Now it is releasing ChilliSource to the industry, and the team want everyone involved. The studio tells **Will Freeman** why it has gone into the tools business

INDIE STUDIOS BUILDING their own engines is nothing wildly unusual.

It's a bold move, certainly, but numerous teams, from bedroom coders through to independents knocking on the door of triple-A, have opted to go proprietary. It keeps it in-house and it keeps it tailored, and in spite of the effort, it's an approach behind some particularly successful, critically acclaimed creations.

> ***"We didn't want to be unable to meet obligations because control might be with a third party."***
>
> Paul Farley, Tag Games

But making their own in-house engine wasn't quite enough for Tag Games, the Scottish team behind a wealth of own IP and high-profile client work.

Some four years ago, the team started working on a proprietary engine. Fast-forward to the dawn of GDC 2015, and the outfit has gone public with not just an open source engine that it is sharing with the entire dev community, but a full suite of metrics tools and a collection of back-end services, covering everything from IAP to leaderboards.

The entire package is being offered under the ChilliWorks banner, but going public is just the start. Tag Games wants you involved.

A DASH OF SOURCE

But before looking forward to Tag Games' vision of a collectively refined, free, open-source engine as part of their studio model, it's worth returning to that point four years previously when CEO and founder Paul Farley and his team set out to harness control of their tool chain.

"There's always aspects to third-party solutions that you'd like to maybe change, or perhaps bugs that it can be hard to work around as a user rather than the middleware's creator," explains Farley, detailing the chain of thought that ultimately spawned ChilliWorks. "We were using a third-party engine on an original IP game called *Astro Ranch*, and Apple had chosen it to be a launch title for the first iPad. Obviously that was great for us, so we wanted to get the game running at the best resolution for iPad."

That took a huge amount of effort, as Tag Games liaised with their engine provider to get support for the resolution needed, and scrambled to deliver the goods to Apple and embrace a significant opportunity.

"It was a great engine, but that experience got us thinking about control when you use a third-party platform," continues Farley. "We felt then that we didn't have total control,

Tag Games CEO Paul Farley (above) says the studio started developing ChilliWorks to ensure it had more control over its projects

Tag Games' Tom Copeland (above) says the engine is flexible as it comes with all the source code

and started to think about when that lack of control might impact delivery, not just to ourselves but to our clients. We didn't want to find ourselves unable to meet our obligations because of an unfortunate case where control might be with a third-party."

While Farley admits that he and his team have seen engine providers improve their customer support and responsiveness across the same time period that the ChilliWorks concept began to crystallise, it had grown clear to Tag that using a third-party engine put the team at the behest of their provider.

"When you're a small studio it can also be pretty scary to think about the future of your engine providers; especially if you're growing at the same time as you are depending on another company," adds Farley, pointing to the historical precedent of RenderWare's effective removal from the market; reportedly a factor in Rockstar San Diego building the wider company its own RAGE Engine.

THE FIRST INGREDIENTS

Back when work began on ChilliWorks – eventually comprised of the ChilliSource engine, ChilliMetrics analytics platform and ChilliConnect online services suite – the team at Tag Games weren't quite planning to be so ambitious with the project.

"We weren't sure at first that we might be trying to reinvent the wheel, but we felt we didn't have any other option," says Farley, who with his team had looked at numerous other options, including using an existing open-source platform that Tag could build its engine on top of.

"We saw a few such game engines, but to be honest none were quite right. That's when we started to think about building our own," he continues.

All this came at a time when the studio was making an organic move to more mobile work, and started to embrace free-to-play and games-as-a-service with more gusto than it had previously. That meant the search for a new engine was also a quest for something more; a solution that could handle every element of maintaining, engaging and retaining players.

"At this point developing a metrics platform was at most a side project," states Farley. "We were starting down the free-to-play route, so a lot was changing for us. And that started us looking not just at engines, but at Google Analytics, Flurry and so on. They didn't give us access to the hard data we wanted. We needed that data to give our analysts. The only other solutions were extremely expensive, and even though we aren't a very small studio – we've around 35 people here – they were beyond our budget."

It was in that mindset that Tag increasingly understood they wanted to do everything themselves. They wanted to build an engine that reflected new trends in games development, and a metrics platform and service suite that would step in time with that engine. The seed had been sown for what ChilliWorks would become.

A RECIPE FOR CHANGE

Under the bonnet of the ChilliSource engine lurks a source engine in the classic form, albeit with it's own strengths, as Tag software engineer Ian Copeland explains.

The API has been designed to offer a clean and modern look that devs can change on the fly if they aren't happy with something already integrated into ChilliSource

"First of all it is a source engine," he confirms. "So it comes with all the source code, and that means it's a lot more flexible. If you don't like something about the ChilliSource engine, you can just change it. So in that regard it works roughly similarly to Cocos2d or Marmalade. But it's a much newer code base, so the actual API is very clean and very modern, we feel.

> ***"When you're a small studio, it can also be scary to think about the future of engine providers."***
>
> Paul Farley, Tag Games

"Additionally it's incredibly extensible and incredibly modular, so it's really easy to add stuff to it, whether that's for your game or for the engine as a whole."

Farley adds: "We started at just the right time, and that became a huge advantage for us. ChilliWorks has been underway those three or four years, and a lot of the other similar services and solutions are maybe ten or 12-years old. So we've had nothing in place to re-work for today's games' demands. We've started at a time when this technology is really coming into it's own."

ChilliSource's in-development GUI tool is a great example of that, explains Copeland, pointing out that it compliments ChilliSource's current mobile and tablet leaning.

"The GUI tool we're working on is supported by a GUI system, and it's something we've put a lot of work into to make it very current," says Copeland. "It's very powerful and we've been building it for years. Its focus is making it very easy to build a good quality GUI that will work across multiple mobile and tablet platforms and a range of different screen sizes, and a GUI that meets today's standards."

The engine currently leans towards mobile but, thanks to its open-source nature, can also be very easily adapted for any target platform, and according to Farley, is built to be particularly easy to use.

"A month learning a new engine is a month not make games," he states. "That is not a good situation, and one ChilliSource will help you avoid."

ADD SOURCE TO TASTE

Accessibility and flexibility is all well and good, but why make it utterly open source, and completely free? Tag may charge for additional modules – something like $10 to $20 a month for an additional element might be typical – but the core of the engine and a complete feature set for development will come with no cost.

"We'd found out over time that a lot of the tools we'd been making weren't being developed by games developers, and were

perhaps first made for the likes of web developers instead."

That meant Tag were sometimes paying for – or looking at paying for – a number of features that it was unlikely to use.

"As an indie you have to run a tight ship to survive," asserts Farley. "I think that's how we've lasted eight or nine years. So you can't be wasting anything on tools you don't need. We started to think that other studios would be facing the same challenge, and looking for a tool tailored for them."

At the same time, Tag started to consider that a great way to get a better engine was to get more people involved. The team had hired additional server engineers, and are still looking to grow with the engine, but that isn't enough for their ambition for ChilliSource. They want as many people as possible on board; for the good of the engine itself, Tag, and games developers across the world.

Of course, Tag also has to make money, which is where ChilliMetrics and ChilliConnect come in.

BEYOND CHILLISOURCE

ChilliConnect and ChilliMetrics will be paid-for services. Harnessing ChilliSource doesn't mean users must sign up to the accompanying ChilliWorks platforms, but each element of Tag Games' technology triptych is designed to be complimentary to the others.

"ChilliConnect is a smorgasbord of connected services," explains Farley. "It's things like in-app purchase validation tools, and user management tech that lets you go in and look at each user individually so you can see how they've experienced your game, and what issue you might have had.

> ***"If you don't like something about the ChilliSource game engine, you can just change it."***
>
> Tom Copeland, Tag Games

"That would even let you drop specific things – say some coins – into that specific user environment. Then there's leaderboards and achievements support, and stuff for in-game communication and chat.

"There are also things like push-notification support and messaging. So there's a whole group of things that bring functionality to make your game connected and social, including multiplayer."

Like ChilliSource, the emphasis is on simplicity and user-friendly design; an approach that's been repeated with the ChilliMetrics platform.

"As with ChilliConnect, where we didn't want to get too distracted by an over-the-top feature set," says Farley. "It's about giving developers what they need at a level of quality, rather than giving them all this stuff they don't need."

That, Farley explains, means providing a window to deep, meaningful data that a small team can crack open and interpret. That access to raw data is what Farley believes is what defines ChilliMetrics, but the platform also provides typical features such as a dashboard that will allow users to access various Key Performance Indicators.

At the time of writing, the ChilliConnect and ChilliMetrics platforms remain in progress.

ONE FOR ALL

The ChilliWorks suite in its entirety was conceived for smaller teams and even students. To that end, it has already been seeded into universities in the UK, such as Scotland's Abertay University – famed for the quality of its games courses.

But according to Farley, the tools and services are also attracting attention from somewhat larger teams.

"A lot of larger studios and publishers have been very interested," says Farley. "They've maybe been basing their entire tool chain around a third-party offering, so they've got very little control over that side of things.

"They recognise the need for more control over their tool chain, and so we're expecting the engine to be used by bigger teams too. The potential is incredibly wide."

Previously ChilliSource has been used by Tag in 12 or more commercially released games, including projects for Gree, Mind Candy and Ubisoft.

And for anybody unsure about adopting middleware made by a relatively small team, Farley concludes with a confident retort to the naysayers.

"We don't have investors, and we're not looking to make a 20-times return for anyone," he confirms.

"We're looking to make enough to grow Tag and improve the services. So we're not going to disappear if we don't make huge amounts of money."

The technology's future success certainly isn't assured, but backed by Tag Games' heritage and the potential of an open-source community, it may be that in years to come, with Farley and his team still busy on the platform, ChilliWorks stands as a household name in the middleware market. ■

www.chilli-works.com

A CALL TO ACTION

THE POTENTIAL OF any source engine comes from the contributions of a community around the platform.

It's a fact that CEO Paul Farley and the rest of the Tag team are clearly aware of with regard to the ChilliSource engine and surrounding technologies.

"We really want people to get involved, so I'd say to people interested please do come and be a part of it and please do collaborate," suggests Farley. "It's Tag Games that are developing it, seeding it and launching it up to now, but we want it to grow into its own thing, almost beyond Tag.

"Getting involved gives you a chance to take control. We're offering a chance to be involved in building something better than the current options. I firmly believe the existing tools are good, and are always getting better. But there's always room for improvement, which will happen more the more people get involved and form a community around this."

Rendering the future

Yebis, Paradox and Mizuchi: three products that Japanese tools firm Silicon Studio hopes will help it expand internationally. **James Batchelor** finds out more

Top to bottom: Silicon Studio's Colin Magne and Masaki Kawase want to introduce the firm's products to more Western studios

SILICON STUDIO IS best known as the provider of high-end graphics tech Yebis and developer of games like *Bravely Default*. Used to create stunning visuals, the team's middleware has attracted the attention of both games developers and Hollywood greats alike – but it is just one feather in the Japanese firm's cap.

The company is currently at work on the Paradox game engine, a project that became open source back in October. Over the last few months, Silicon Studio has been working on adding a scene editor, a physically-based rendering material editor and post-processing effects.

The new features are expected to be released as part of a new beta around GDC 2015, with the company going into more detail at the San Francisco conference. Crucially, these additions expand the scope of Paradox and who is able to use it.

"Most of the users at this point are still programmers, because Paradox is still under development," said Colin Magne, general manager of the firm's product department. "But now we're adding a lot of tools that will be useful to artists, game designers, level designers and so on.

"We've had some nice feedback from programmers because it's basically C# but we have an architecture that is completely flexible and gives access to lower levels of the engine, so they really feel they have the power to program anything they want."

Silicon Studio is also due to reveal more about Mizuchi, its new real-time graphics middleware and rendering engine. Combining the movie-quality post-effects of Yebis 3 with physically-based rendering, high-resolution materials and more, the firm is confident Mizuchi plugs a significant gap in its home market.

"If you look at Japan, a lot of people have their own game engines but there aren't many high-end rendering engines," lead software engineer Masaki Kawase explains.

> ***"We're really looking to push our tech out this year: Europe, North America and beyond."***
>
> Colin Magne, Silicon Studio

"We have a high-end rendering engine you can slip into place of whatever you have at the moment. And it's more advanced than what some already have."

So far, only a video demo has been seen, but Mizuchi is already turning heads.

"A lot of games companies from around the world are all of a sudden aware of the existence of our technology, and they're interested in it," says Kawase. "It adds some elements that some people have never seen before. It was a bit of a buzz for us and we're feeling pretty positive about it."

THE THIRD COMING

Released back in August, Silicon Studio's flagship product Yebis 3 continues to be a major investment. Recently added features include optical vignetting physical simulation, diaphragm physical simulation, and bokeh chromatic aberration.

In fact, the way Yebis handles bokeh – the quality of out-of-focus light in a scene – is a particular highlight. Silicon Studio claims that by simulating lens elements and structure, its tech is able to produce a bokeh quality similar to that of a real photograph.

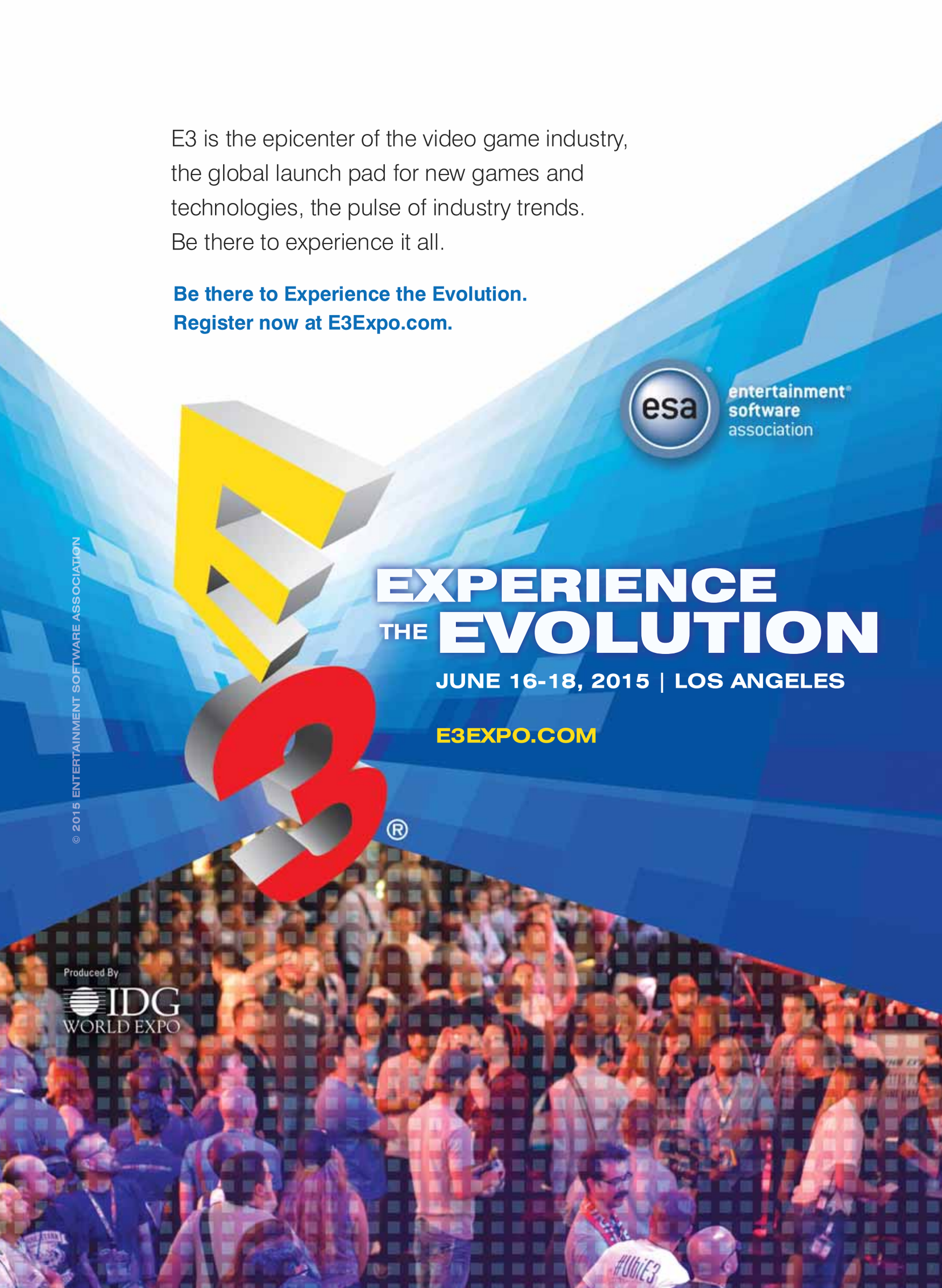
"We've had lots of very good feedback – and not just from games developers," says Kawase. "We've also had positive comments from other industries that have been using it for things like video production. And we can only make Yebis stronger, because we're going to add more features and improve on the current ones."

This trio of high-end technology form the central pillars to the plans for 2015 at Silicon Studio's product department. With plenty of satisfied customers in its home territory, the company hopes to form partnerships with more Western developers and other industries.

"Until now, we've had a very limited approach to the international market," Magne says. "Obviously, we've tried to make sure we have a strong foundation in Japan before we go elsewhere too much. But now we really feel that we've reached the point where we are strong in Japan with a lot of users, and launching things like Mizuchi helps us to move forward.

"So with the feedback and interest we've had globally, we're really looking to push out this year: Europe, North America and beyond."

And the first stop is GDC in San Francisco. You can find Silicon Studio at booth 316 in the GDC Expo, or find more information by contacting pr@siliconstudio.co.jp or visiting **www.siliconstudio.co.jp.** ■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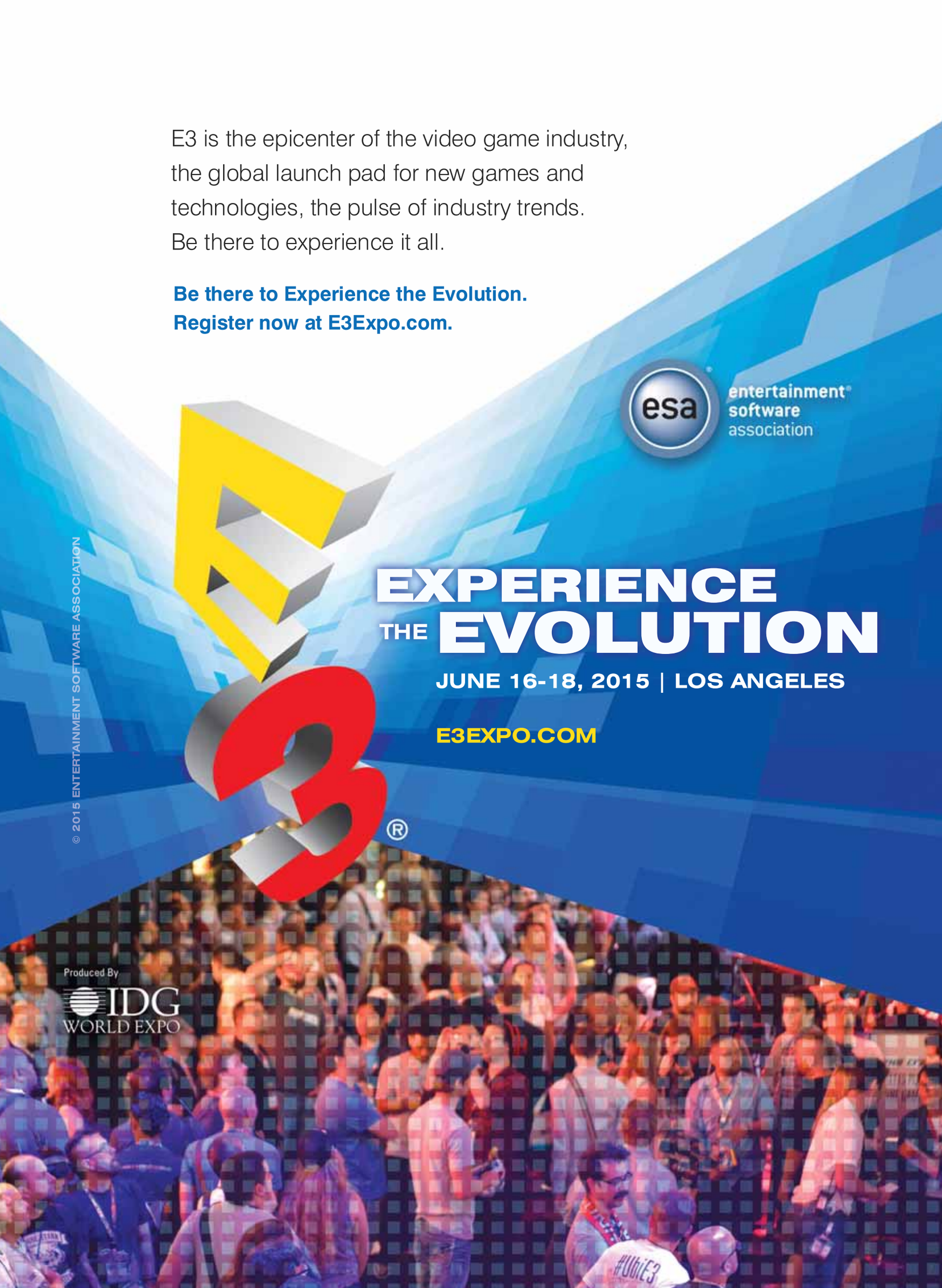
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Lessons from the GameGuru

The Game Creators' new engine hopes to make development of 3D video games all the more accessible, and it costs just $20. **Will Freeman** meets the tech's creators to discuss the tool's potential

Main: GameGuru simplifies games development for users with little to no experience

Above, top to bottom: The Game Creators' Lee Bamber and Rick Vanner

ACCESSIBLE GAME DEVELOPMENT tech is now a given in the industry. Numerous tools support the indie uprising, and in the UK and beyond building games is making an impact in schools.

One outfit specialising in opening the doors of game dev to the masses has been around a little longer than most. The Game Creators effectively formed some 16 years ago, as the company founders developed Dark Basic, an intuitive coding language.

Still guided by the same ideas in 2015, having fostered a community around FPS Creator and App Game Kit, TGC have had a new product underway for over two years, at the time of writing set for a GDC launch.

That product is GameGuru, which is by definition a straightforward game engine. Little startling about that, until you consider how it is delivered. Priced at $19.99 for the complete engine, with no need to pay anymore for the likes of seat licenses, it is sold on Steam, under the Games category.

FIRST-PERSON FIRST

The engine allows users to craft 3D game worlds – specifically first-person titles for launch – from within a given game itself, without the need for code, node-trees and other conventions of development; though getting further under the bonnet is optional.

"The engine itself is almost a sandbox 3D environment," confirms The Game Creators development director Rick Vanner. "When you get into that 3D world, you can immediately break into it. You can re-sculpt the terrain, place objects, move things around and really restructure everything. We wanted to merge the technical process of making a game with the feel of playing."

The GameGuru engine targets both the hobbyist and smaller commercially-minded studios, catering for the delivery and sale of games made using the platform. It will offer support for multiplayer and online lobbies, as well as an integrated store for users to craft and sell assets and other extensions.

"We've always focused on hobbyists who want to be creative," continues Vanner. "We're not trying to compete with Unity or teams of that size. We've always wanted to make the kind of tools that we want to use; ones that let us make games quickly."

FEATURE RICH

GameGuru, which arrives with ten complete games that customers can pull apart and rework to their heart's content, also runs on relatively low-spec PCs in its quest to reach the widest audience possible.

"We've done a lot to make sure it works with low-end machines, including laptops," confirms CEO Lee Bamber. "As we developed it we kept optimising more and more until we knew the engine could run on integrated graphics. We feel it's quite an achievement."

In that regard, Bamber and Vanner appear to have been successful, as Intel is demoing GameGuru at GDC as a means to demonstrate the potential of some of its less muscular, more affordable machines.

But support for low-end PCs doesn't mean the engine lacks clout, The Game Creators duo insist.

"While it's highly optimised for low-end specs, it still retains all the things you'd expect from a modern engine," states Bamber.

"In the terrain there's a full 3D physics system, a huge amount of Lua commands in the form of a Lua scripting engine – so the option for programming and coding is there – and there's scenery effects, a multicore light mapper, cascade shadow maps for dynamic shadows, full realtime lighting, triplanar ground shaders, you can import models and sounds; the list goes on."

And that list is expected to grow in the future. Work is underway on a custom character creator; Oculus and VR support – including the capacity to use the engine 'in VR' – is due in 2015; and support for more game forms is well underway.

There's also the none-too-insignificant detail of the engine being sold on Steam under the Games category, rather than alongside the other tools on the store.

"We want to create a new paradigm," explains Bamber. "We aren't thinking 'is it a tool or is it a game?'. We wanted to create an experience that can transcend both those identities."

Arguably, that is something *Minecraft* has achieved, and we all know how that game's story goes.

Vanner and Bamber might not be guaranteed moving into mansions costing a reputed $70m immediately, but one thing is sure; GameGuru opens another door for more people to engage with the thrill and challenges of making games. ■

www.thegamecreators.com

HEARD ABOUT

I hear dead people

John Broomhall talks with Paul Bennun, chief creative officer at Somethin' Else, about audio-only games

Pic © Matt Locke

Somethin' Else's CCO Paul Bennun (above) says creating a first-person audio-only title means a completely different approach to level and game design

GRAB YOUR IPHONE, don your headphones, and just listen. Your brain will do the rest in the latest audio game from the respected company behind *Papa Sangre* and *The Nightjar*, Somethin' Else.

With *Audio Defence: Zombie Arena* – in which sound is the only clue as to which direction zombies are approaching – the studio appears to have cornered the market in this interesting genre, but does chief creative officer Paul Bennun agree?

"We do think we've made the best audio games in the world, ever," he says. "It was actually that ambition that started us down the road – we knew the GPU in your mind is better than anything in a computer, so we wanted to make a game with the best graphics ever.

"We also wanted to make games blind people could play with no compromise. We're absolutely proud of this. Please note: we do not make 'games for blind people.' We make 'games blind people and sighted people can play', with top-notch accessibility."

The 'first-person' nature of *Audio Defence* is key. The information players receive is the same as if there were in the described scenario. Bennun says this means a completely different approach to games development.

"You have to totally re-think the way objects look – to consider the physical function of every game entity," he explains. "You have to take level design and game design all the way back to things you could physically do in a space.

"And what we've learned about the psychology of players is very interesting. When someone who's never been able to see hears a 'snufflehog', how does it look compared to someone who has seen a pig? Is 'the dark' a frightening concept to someone born blind?"

SURROUNDED BY SOUND

Binaural audio is a complex but crucial field when it comes to the development of Somethin' Else's games – and it's a concept Bennun believes is overlooked.

"You wouldn't think there was a hugely important correlation between binaural audio and a game's control scheme," he says. "But there is – we learn how to hear spatially, and we expect a turn of the head to give a linear and proportionate difference to the sound we hear.

"This extends to control schemes: if the input you make to a system, such as a turn, does not result in an analogue change to the output, then it doesn't just sound bad – it's unintelligible. That's why our audio games have the scheme they do: swipe or physically turning. Shortcuts like tapping to turn don't work: that's a digital input to a system we are trained to understand in an analogue fashion."

On a similar note, Somethin' Else has also learned that humans are "actually pretty crap" at identifying a sound's azimuth – i.e. how high it is above the ground. When it's a recognisable sound like a helicopter, people instinctively look up. So, the team needed to add 'cognitive clues' about where an in-game sound is.

"But you can't go over the top," says Bennun, "or the player will wonder why you're being obvious."

When it comes to the tech for audio games, an ebullient Bennun has no hesitation in crowning his *Papa Sangre* engine king: "We know it's the best — we've seriously evaluated them all. Our platform does real-time binaural synthesis: you put in a mono sound and then use your game logic to tell it where it is in relation to the player – just like you would graphics.

"It also has a brilliant API and positions sound with incredible granularity – far, far more than certain other platforms. Plus, it's very lightweight: we got it working on an iPhone 3GS. The amount of sounds it can spatialise is arbitrary, depending on the CPU it's running on. But silence is loud. Complexity isn't always a good thing in audio games, and we can spatialise far more sounds than any game needs, even on mobile devices." ■

John Broomhall is a game audio specialist creating and directing music, sound and dialogue. Find him at: **www.johnbroomhall.co.uk**

UNITY FOCUS

Reflecting on Radial-G

Tammeka Games tells us how Unity helped them bring sci-fi racing to virtual reality

RADIAL-G IS THE first title to be produced by Tammeka Games, a new team with decades of experience across multi-award winning titles as well as serious and simulation games.

For its debut, the studio opted to create a sci-fi racer optimised for Oculus Rift. While plenty of engines support the pioneering device, there was no question which one Tammeka would choose.

"We had been using Unity for many years so we already had a strong in-house knowledge of the capabilities of the engine," says game producer Sam Watts.

"When the Oculus Rift DK1 headset was released, we jumped onboard immediately as we knew we could create something special. Unity allows us to quickly implement VR support into existing and new projects whilst easily testing out ideas and prototypes, determining what works, and what doesn't."

The team used and adapted existing Unity tools to create the game's sci-fi world and pipe-shaped tracks.

"Through the engine we were able to nail the essence of the game down and build upon the environment through testing the effects on motion sickness and so on, without having a lengthy build time slowing down development," says Watts.

"The single, drop-in SDK element of the Oculus VR support for Unity meant we were up and running in a short amount of time, allowing us to concentrate on the important design decisions and programming tasks."

> ***"Only 30 players out of 2,000 had to stop after 20 seconds, after which the body accepts VR."***
>
> Sam Watts, Tammeka

Given the fast-pace of *Radial-G*'s racing, motion sickness was a major concern for Tammeka Games. Watts says the team spent a lot of time identifying every way to counteract this, whether it was within the game mechanics, the design of the world or the virtual reality display.

For example, the studio has restricted rapid changes in acceleration. While there are speed boosts and slow-down gates, the actual difference in speed isn't huge.

Radial-G has also been designed to be played in a sitting position, as if in a cockpit, providing "a natural connection between brain and senses". The fact that the player's ship is constantly connected to the pipe-shaped tracks makes the experience feel more stable and provides a natural limit to player/camera movement – they can look around but only within the confines of their cockpit.

Watts says an element of disconnect also helps: "Using a futuristic environment helps the brain determine the difference between the game and the real world. It allows the brain to switch off and have fun.

"We've carried out extensive playtest sessions with as many different types of user as possible to measure responses, ability, ease-of-use and any sensations of sickness brought on through play. To date, we've seen over 2,000 players – only 30 or so had to stop after the first 20 seconds, after which the body accepts VR."

The rapid prototyping that Unity allows was a significant contributor to the number of tests Tammeka was able to organise.

Watts concludes: "The ease that Oculus SDK integrates with the Unity engine makes development a breeze for us." ■

Radial-G
Developer: Tammeka Games
Publisher: Tammeka Games
Platform: PC
www.radial-g.com

Main: The futuristic world of Radial-G helps create a disconnect between the player and virtual reality

MADE WITH MARMALADE

No need for native

Developers discuss the merits of cross-platform tools such as Marmalade over native development

Don Whiteford (above), MD of Talisman: Digital Edition developer Nomad Games, says cross-platform releases have become a fundamental business strategy for many studios

IN TODAY'S MARKET, developing games natively for each of your target platforms can be a chore – particularly in the increasingly fragmented mobile sector.

While creating games specifically for a platform can have its advantages – especially if you are building the game with a solitary format in mind – if you hope to monetise your game across as many devices as possible, it can be a hindrance.

"If you need to cover multiple different platforms, then you need to be familiar with each platform you want to develop for," says Vedran Manojlovic, architect and lead developer at *Swamp Attack* developer Amo 2. "That often includes using different programming languages, which means you will have to re-write your whole game for each platform.

"Doubling of code also means doubling of bugs and support needed. So you would need to double your development staff and double the code, which brings double the bugs and pushes up risk and complexity.

"But if you eliminate that, you have more time to spend with friends and family. And cats. And radioactive kamikaze raccoons. Whatever floats your boat."

DEPLOY EVERYWHERE

The answer for many is to use cross-platform development tools, such as Marmalade. Creating a game that can be easily deployed to multiple devices and app stores, without compromising on performance, takes much of the pain out of multi-format native development – perfect for studios such as *Talisman: Digital Edition* developer Nomad Games, for which MD and co-founder Don Whiteford says cross-platform releases are "a fundamental business strategy".

"To maximise our reach and our fans, we have to be cross-platform," he says. "In a crowded mobile space, it's vital. As a team, it's been our philosophy for well over a decade. Fans of our game prefer to play on a variety of devices, so the game has to go where the players are."

Manojlovic says there are many advantages to cross-platform development: "You only have to develop one game code, and it will work on all the different platforms, such as iOS, Android, Windows, and more. Also, for the most part, you don't have to deal with the system specifics of each platform.

"It can save you a tremendous amount of time and resources. Instead of having a team of platform-specific specialists to keep your code up-to-date, you can focus your resources on where it counts – delivering a superb user-experience. I don't think we would be able to put out such a polished and fun game in the timeframe we had without Marmalade."

> ***"Doubling of code means doubling of bugs and support needed. So you'd need double your staff."***
>
> Vedran Manojlovic, Amo 2

That's not to say cross-platform games development tools oversimplify things. In fact, you can still benefit from some of the advantages specific formats offer, taking some of the learnings there and applying them to your mobile titles.

"In the PC environment it's an awful lot easier to beta, fix and update there," Whiteford says, by way of example.

"It means that when you deploy on mobile, the vast majority of problems have already been eliminated. I have seen other games developers say the same thing. Plus, if you come from a PC or console background, it's all an awful lot easier."

The Nomad Games boss adds that cross-platform dev tools can also be very accessible, particularly if you're comfortable with C++.

Manojlovic goes on to say that cross-platform tools can copy the exact functionality and programming logic you would find in native tools, so a good native developer can quickly transfer to a good cross-platform dev.

"These tools eliminate the need to invent the wheel each time you want to build a car," he says. "You can write only one instance of code, and it will automatically work on different platforms. Sometimes you will need to write some native code for specific platforms, and with Marmalade you can simply write an extension for that, which you can use from your main code."

With mobile marketplaces becoming so crucial to success, particularly for smaller studios, cross-platform development has become just as vital, streamlining the game creation and release process.

Whiteford concludes: "Seeing a game move flawlessly from the desktop environment to multiple mobile platforms in just days is always exciting, and with Marmalade all our key platforms and more are covered." ■

Marmalade at GDC
Cross-platform tools such as Marmalade make it easier for studios to deploy to multiple platforms. You can visit Marmalade at GDC #930.
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UNREAL DIARIES

How real is Unreal?

The road to real-time photorealism is paved with Unreal Engine 4

> ***Individuals and small teams can now produce real-time results rivaling the look and feel of pre-rendered CG using game engine technology.***

WHAT COLOUR IS a given pixel? The more accurately this is solved, photorealism in real-time environments becomes increasingly plausible.

Thanks to physically-based rendering (PBR), Unreal Engine technology accurately simulates materials and lights better than ever before, enabling artists and designers to focus on gorgeous visuals rather than rendering intricacies.

For this reason, Unreal Engine 4 has drawn particular interest from the architectural visualisation community.

MAKING IT UNREAL

One of the first works to go viral was an interior scene from Koola, a brilliant but modest environment artist who prefers to remain anonymous.

Koola helped the community learn his process for setting up scenes by answering questions in the Unreal Engine forums and then releasing *Lightroom: Interior Day Light* for free through the Marketplace.

Aside from optimising the static global illumination calculation, utilising post-processing features such as colour correction, depth of field, bloom, scene fringe and tone mapping are key to building a convincing representation of the real world.

A central element to Koola's workflow is a custom lookup table (LUT) made in Photoshop. UE4's colour correction is implemented through LUTs, and Epic's documentation explains how to create LUT textures step-by-step.

Another lauded piece of work is the *Berlin Flat* by Lasse Rode, a co-founder of architecture and product visualisation firm Xoio. Lasse published an article detailing the making of the *Berlin Flat* on not only the Unreal Engine blog but also that of arch viz heavyweight Ronen Bekerman. And then, like Koola, Xoio graciously released the project for free on the Marketplace.

In January came another surprise, this time from France. Self-described computer graphics generalist Benoît Dereau released *Unreal Paris*, a virtual luxury flat (*above*). The video of the scene eclipsed two million views within just a week, and the community hacked it to run on Oculus DK2 within hours of the project's release.

ARCH VIZ EVOLVED

It's not Unreal Engine's first trip to the arch viz rodeo. Global architectural firm HKS used Unreal Engine 3 to pre-visualise the Dallas Cowboys stadium in 2007, and followed it up with numerous large-scale commercial projects using the engine.

High-fidelity environments are in demand more than ever with VR barrelling its way into mainstream entertainment. And now, individuals and small teams can produce real-time results rivaling the look and feel of pre-rendered CG using game engine technology like UE4.

Comparing the most successful projects built with UE3 to what is already possible to do in UE4, the pixels of the future are looking quite beautiful. ■

Koola released Lightroom: Interior Day Light (above) free on the Marketplace and helped developers learn his process for setting up scenes on the Unreal Engine forums

Top left clockwise: Unreal Paris by Benoît Dereau, Berlin Flat by Xoio, and another scene by Koola

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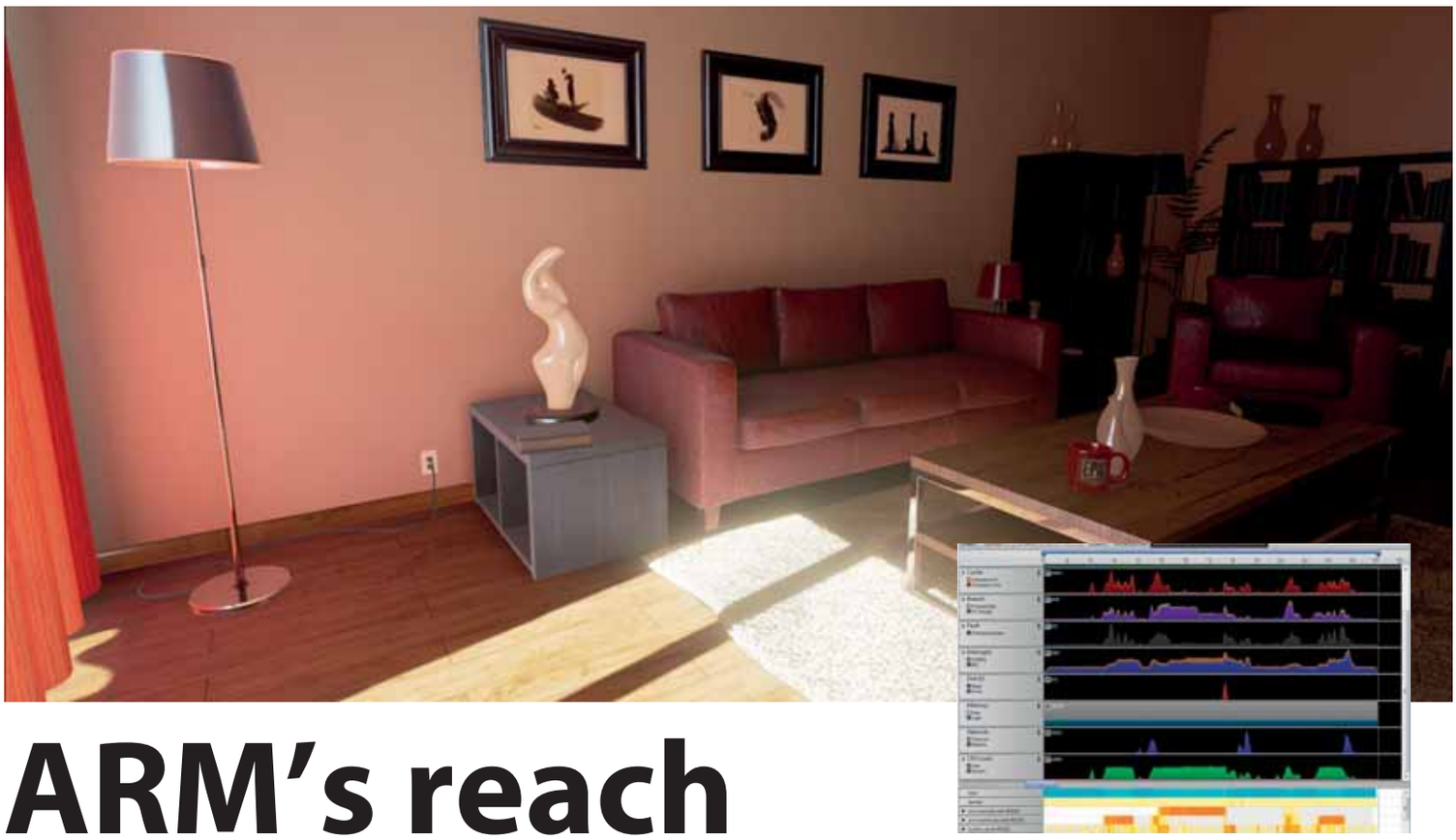


ARM's reach

The microprocessor specialist talks us through its ecosystem designed to support games developers

ARM's Nizar Rhomdane (above) says Enlighten (main) is one of the many technologies that help devs achieve console-quality graphics through Mali devices

WITH 35 PER cent of the world's mobile phones containing an ARM GPU, developers would do well to learn a little more about the global microprocessor firm.

For a start, ARM has developed an ecosystem of collaborative and supportive partners around itself, working closely with well over 1,000 specialists in different fields in order to make the full power of today's mobile hardware accessible to developers.

A prime example is the firm's collaboration with open source game engine Cocos2d – something that was a major focus in 2014, according to ARM's director of ecosystem Nizar Rhomdane.

"Over the past year, we have partnered with this tech giant to ensure that mobile developers have simple access to profiling and debugging tools that are optimised for Mali GPUs," he explains. "This resulted in Cocos2d integrating ARM DS-5 Community Edition into the Cocos2d Code IDE.

"We're currently participating in over 100 projects with other companies with the aim of taking advantage of the latest functionality of mobile devices and generating higher performing, easier-to-develop applications."

The rise in console-quality graphics on smart devices – thanks in no small part to ARM's own GPUs – also presents new opportunities.

"Pixel densities and screen sizes remain on an upward trajectory and an acceptable frame rate continues to be around 30FPS," Rhomdane says. "As mobile processor performance approaches that of consoles, games can include more complex 3D geometry, highly detailed textures, better lighting, accurate physics simulation, and more extensive environments.

> ***"Thanks to rapid progress in hardware, we are seeing console devs target mobile."***
>
> Nizar Rhomdane, ARM

"Many developers have been reluctant in the past to make games which test the boundaries of mobile graphics. The fact that such games would only run on high-end devices did not make business sense. However, thanks to the rapid progress made in mobile hardware, we are seeing console developers target mobile."

Rhomdane adds that desktop-style graphics APIs on mobile also makes it easier for devs to target both PC and smart devices. The performance and architecture in ARM's latest Cortex-A72 CPU and Mali-T880 GPU is said to be close to that of PS4 and Xbox One.

ENGLIGHTENING MOBILE

Another major pillar of ARM's gaming offering is Enlighten, Geomerics' high-end lighting technology which Rhomdane says is "mobile ready and able to run with the same quality options available on the latest consoles".

Acquired by ARM in 2013, the lighting firm has actually influenced the roadmap of its graphics processors in terms of how ARM can best improve the look of mobile games.

"The biggest contributor to the mood and realism of any game is lighting and the ability to accurately simulate the interaction of light and materials in a scene," says Rhomdane. "Physically-based shading combined with dynamic global illumination has traditionally been too computationally burdensome for mobile – yet it is critical to produce the types of cinematic effects in the latest big budget triple-A games.

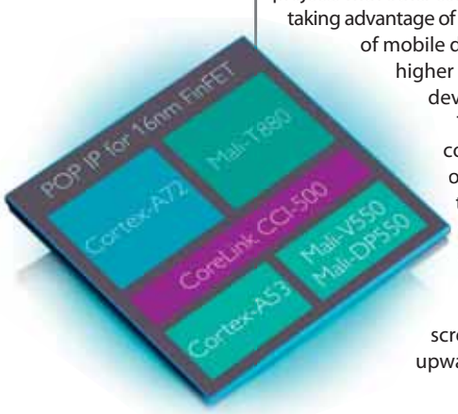
"Enlighten brings console and PC-style lighting techniques to mobile within the performance and energy budgets that are inherent in such devices."

Another method of improving the look of a game is occlusion culling, and ARM will be demonstrating new OpenGL ES 3.1 compute shaders to help with this during GDC 2015.

But without support for studios, these tools go to waste. To that end, ARM has a dedicated website – **malideveloper.arm.com** – and has set up a Developer Education team. There are also blogs, sample codes and tutorials available online, and devs can help each other at **community.arm.com/mali**.

If you're heading to the GDC Expo, find out more by visiting ARM at Booth 1624.

"We strongly believe it is our responsibility to equip mobile developers with the tools and resources necessary to bring a mobile application to market quickly and successfully," Rhomdane concludes. ■



DEVELOP'S TOP TIPS:

10 THINGS YOU DIDN'T KNOW YOU COULD DO WITH UNITY

Unity community evangelist Joe Robins on some of the engine's lesser-known secrets

When first starting out with Unity, some forget that they are in Playmode. Go to 'Preferences', then 'Colours', then 'Playmode Tint' to make it a more memorable colour.

To simply and easily position a camera, find the angle you want by navigating in the scene view, select the main camera and select "Align With View". Or use the shortcut: Ctrl/Cmd+Shift+F.

When rotating an object, hold down Ctrl/Cmd to snap the rotation. This same method also applies to moving an object. The default snap values can be altered in the Edit menu under Snap Settings.

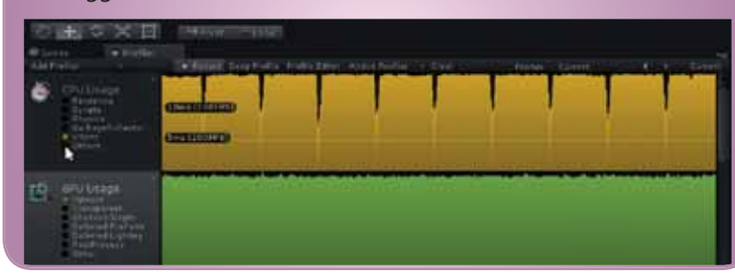
Here's another Snapping trick: by holding down the V key, you can select and place objects using vertex snapping. This can be especially helpful when constructing levels out of modular geometry.

Don't have quite the asset you are looking for in the project view? Type your search terms in the project view, then change the search from "Assets" to "Asset Store". This will allow you to preview assets on the store without even having to open it.

Clicking the blue '?' book on a component in the inspector takes you directly to the local documentation on that component.

Found your perfect values while testing and playing in Playmode? Click the small cog-shaped icon in the top right of your component in the inspector and then click "Copy Component". You can then paste these values directly back in when you exit Playmode.

In the profiler, the coloured squares next to the things you profile – Drawcalls, Scripts, Rendering, VSync and so on – are buttons you can toggle on and off to reduce clutter.



Use the "Layers" button to show and hide layers. For example, you could create a custom layer for gameplay objects like spawn points and use the layers drop down to hide them.

Are you unhappy with the default layout of your views? Feel free to pick a different layout or entirely customise your own version and save the layout so it's easy to come back to later.

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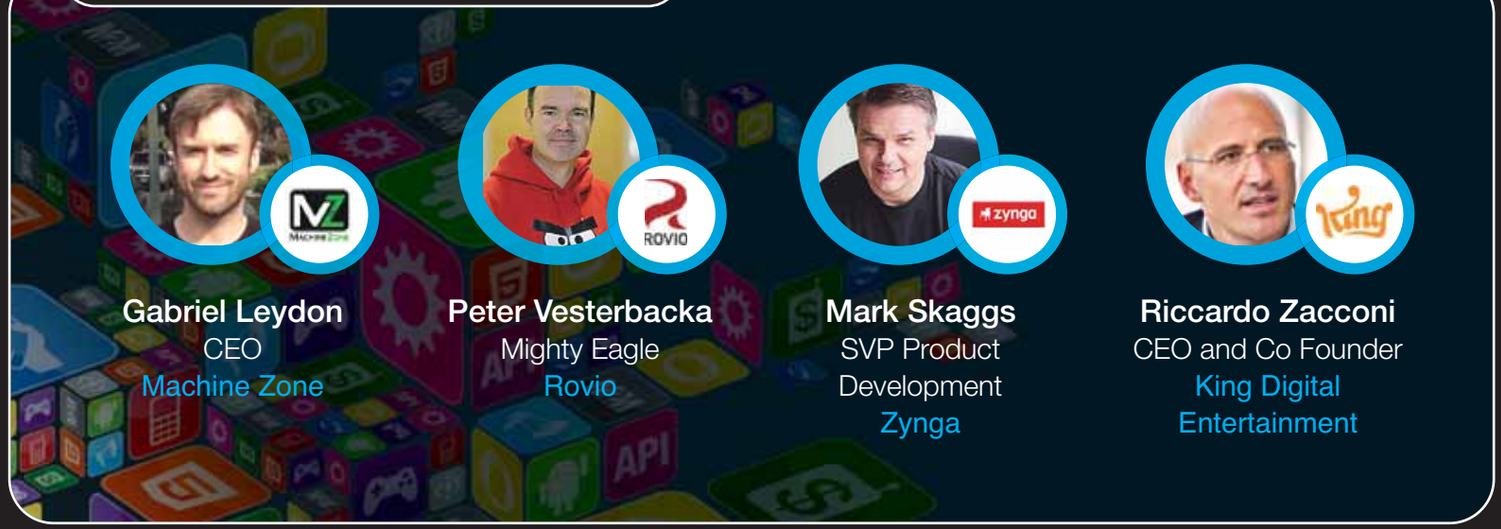

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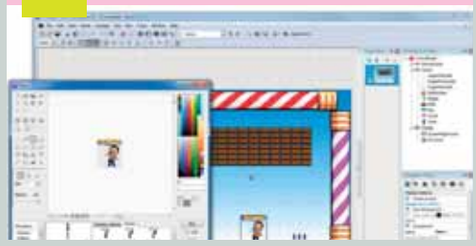

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EVOZON GAME STUDIO is the games development brand of Romanian software and consulting services company Evozon.

The 30-strong team is comprised of a mix of programmers, designers, artists and QA engineers. Given its parent firm's increasing connections to the games industry, product manager Catalin Zima-Zegreanu says the formation of such a team within the company was inevitable.

"Games and entertainment products are an assumed strategic direction for the owners, who have been awesomely supportive and invested in our growing team," he says.

"We can handle anything from art production, game design, game programming in a wide array of technologies, porting to various platforms and the very important aspect of quality assurance.

"We also have small teams doing R&D for our clients in the fields of VR, natural user interfaces using Kinect and Leap Motion, voice commands and eye-tracking technology."

And being part of a 400-person services company gives the games team a massive pool of experience in other areas.

"In close reach we have programmers and QA engineers with toolbelts filled with tech not commonly found in other games development firms," says Zima-Zegreanu. "This becomes increasingly important as games require more reliable services and connectivity.

> ***"We have teams doing R&D for our clients in the fields of VR, Kinect and eye-tracking."***
> Catalin, Evozon

"Just think about all the server issues plaguing games in the last two years, and imagine this sort of issue starting to trickle down to mid-sized studios in the near future."

Evozon has already partnered with numerous notable firms including Microsoft Studios, Digital Chocolate, Ayopa and Amused Sloth. The game studio has also helped with the development of Windows Phone game *Chickens Can't Fly*, later porting it to Android and iOS.

Zima-Zegreanu adds that the team is hoping to expand in 2015: "We are constantly looking out for talented people to join our ranks.

"Recently we've had a few additions to our art team and we're collaborating with local universities to organise a game development-oriented internship later this year for students and young talent." ■

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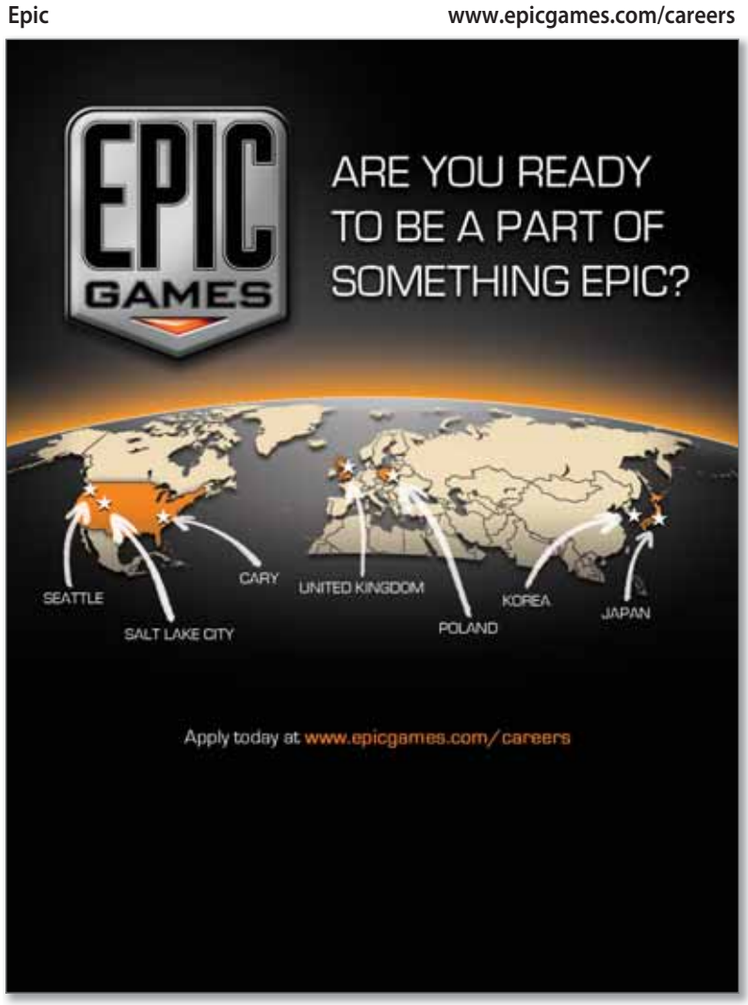

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CLICKTEAM FUSION HAS been designed as a development environment for devs to build games and apps with little to no coding.

The engine, available on Steam and through its own website, includes a custom written native runtime for iOS, Android, HTML5, Flash and PC, with Mac support also coming soon.

The tool has been used in a number of titles including indie horror hit *Five Nights at Freddy's*, as well as *Freedom Planet*, *Mega City* and *Knytt Underground*.

The latest 2.5 release includes new features such as Box 2D physics, while objects and sprites are now controlled and accessed using a visual frame editing system. The company also recently launched Clickstore for users to buy and sell assets and extensions.

> ***"Anyone from an experienced coder to a beginner can use the tool and make a game."***
> Simon Pittock

"Anyone from an experienced coder to a complete beginner can pick up the tool and start building their game within 30 minutes," says Clickteam UK director Simon Pittock.

"Fusion 2.5 is also fantastic for prototyping concepts and visual designs in web, game and app development, publishing and more, allowing you to quickly build proof-of-concept mock-ups and export them to your favourite device."

Pittock says the tool is aimed at those looking for rapid development and cross-platform compatibility, and is open to all.

"Our intuitive visual approach to programming allows you to focus on the look and style of the game first and bolt it all together afterwards which is an amazing way to learn about programming logic and create amazing games in a fraction of the time it might take otherwise," he explains.

"Seasoned developers and newcomers alike will find themselves at home with our tools which offer an extensive library of powerful free add-on objects, building on the core functionality."

In future, the team is adding new web functionality, from tighter Facebook integration and various ad revenue networks to custom web API interfacing and Google Maps support. ■

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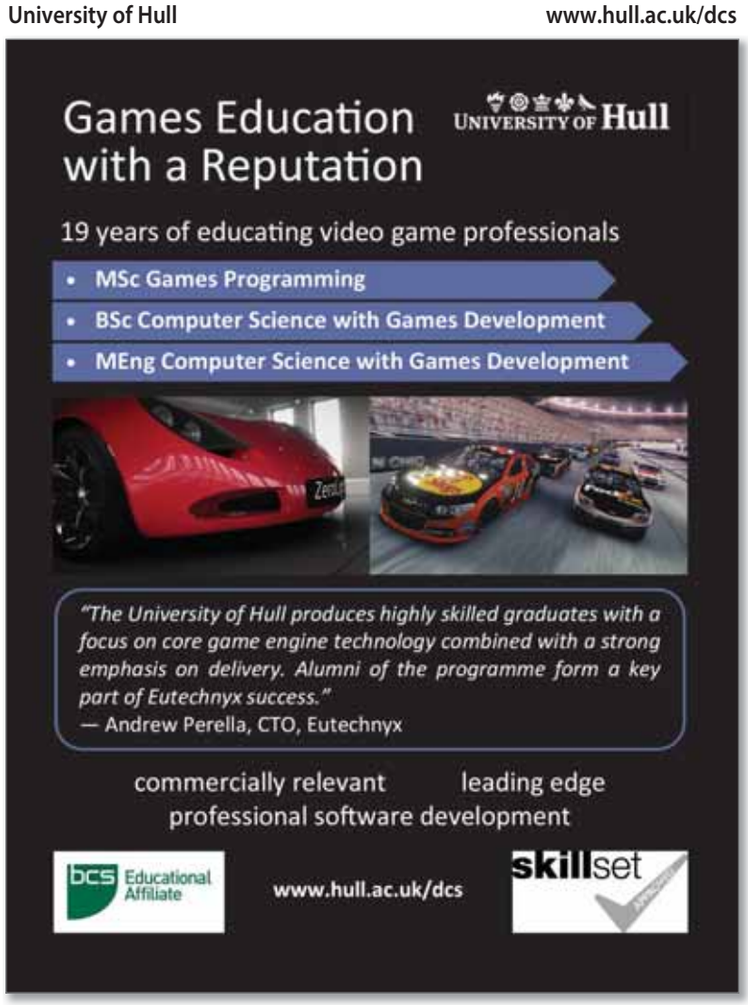
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What was the biggest thing to happen to Supercell in 2014?
Tommi Suvinen, *Clash of Clans*' game lead: 2014 was a big year for us on two fronts: the global launch of our third game – *Boom Beach* – back in March, as well as an ongoing series of updates to *Clash of Clans* and *Hay Day*.

Obviously a new game is a big moment for any developer and we've been delighted at how popular *Boom Beach* has been so far. The vast majority of our game ideas never make it out of the company, and we don't launch a game globally until everyone is confident that it can deliver the quality that players expect from Supercell.

At the same time, we always say that the launch of a mobile game is really only the beginning. You can never be sure that an update will be successful, and there are millions of people already playing the game who will be unhappy if the update doesn't deliver. So it was a fantastic feeling to get such a positive reaction from players.

Few mobile games have the staying power of *Clash of Clans*. How have you managed to make a game players stick with for years?
Suvinen: There really isn't a single, easy answer. The intention from the very beginning was to make a game that people would want to play for a very long time. So from the outset it was a conscious decision to develop a game that had the depth, quality and long-term appeal to keep players interested for years, rather than a 'quick hit' we could make and then move on from.

One of the ways we have done this is through social features. Players really enjoy the ability to chat and send messages to each other, and really work together in a meaningful way. When players feel that they have created something with each other, they will want to keep playing to protect it and build it up even further.

> ***"We've killed a huge number of titles as we weren't convinced people would want to play them for years."***
> Tommi Suvinen, Supercell

We also see games-as-a-service; we act on the feedback we get from players. By constantly developing and balancing gameplay, we're able to not only create new challenges for players, but also keep the whole game fresh.

As you develop the game over time, how do you make it appeal to new and long-time players alike?
Suvinen: We devote as much time to developing the game after release as we do before the launch. The big advantage we have after launch is the feedback from our players: what they like and don't like, what they want to see in the future.

I think the best games provide new content to reward long-term players, but also regularly make improvements to the core gameplay and early stages that every new player starts with. We try to strike this balance in all of our updates. For example, our December update added a new top level, but also introduced a village layout editor that makes it easier for players to adapt their base.

What role do these long-term games play in Supercell's overall goals?
Suvinen: We want every game we produce to be remembered and played for decades – it's central to what we want Supercell to be known for.

We've killed a huge number of titles in development because the teams working on them weren't convinced people would want to play them for years. We've never been afraid to make that decision.

What learnings have you taken from *Clash of Clans* and how will you apply them to future projects?
Meaningful social features go a long way in keeping the players happy and engaged. People love interacting daily with their friends, helping each other out, and going through shared adventures. The introduction of Clan Wars created a new level of social interaction, and it has been successful.

Having a large playerbase also allows us to examine in detail how different players interact with the game. Despite its simplicity, the game has a lot of depth, and the experience keeps feeling fresh as you unlock more units and improve your village. Veteran players get a lot of enjoyment with high-level battles that require unique skills developed by playing the game for years.

Going forward, we have some key ideas that we think are crucial to our games, such as gameplay that stays fun for years and meaningful social tools. But we also know that expressing these ideas in a particular game is more of an art than science. That's why we try many different concepts and see what ends up exciting the team and our players.

Why do you think so many mobile developers struggle to achieve the levels of retention *Clash of Clans* has?
Suvinen: The first thing to remember is there is a degree of luck in developing games. Nobody can predict what will be a hit.

I can only really talk about what we do at Supercell, but I know that developing games for mobile is different than for other platforms. Primarily, players now expect that a game will be constantly refined and updated after launch. So, to retain players, you have to treat development as an ongoing process that never really ends. n

STUDIO SPOTLIGHT

This month: **Supercell**

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What was the biggest thing to happen to Supercell in 2014?
Tommi Suvinen, *Clash of Clans*' game lead: 2014 was a big year for us on two fronts: the global launch of our third game – *Boom Beach* – back in March, as well as an ongoing series of updates to *Clash of Clans* and *Hay Day*.

Obviously a new game is a big moment for any developer and we've been delighted at how popular *Boom Beach* has been so far. The vast majority of our game ideas never make it out of the company, and we don't launch a game globally until everyone is confident that it can deliver the quality that players expect from Supercell.

At the same time, we always say that the launch of a mobile game is really only the beginning. You can never be sure that an update will be successful, and there are millions of people already playing the game who will be unhappy if the update doesn't deliver. So it was a fantastic feeling to get such a positive reaction from players.

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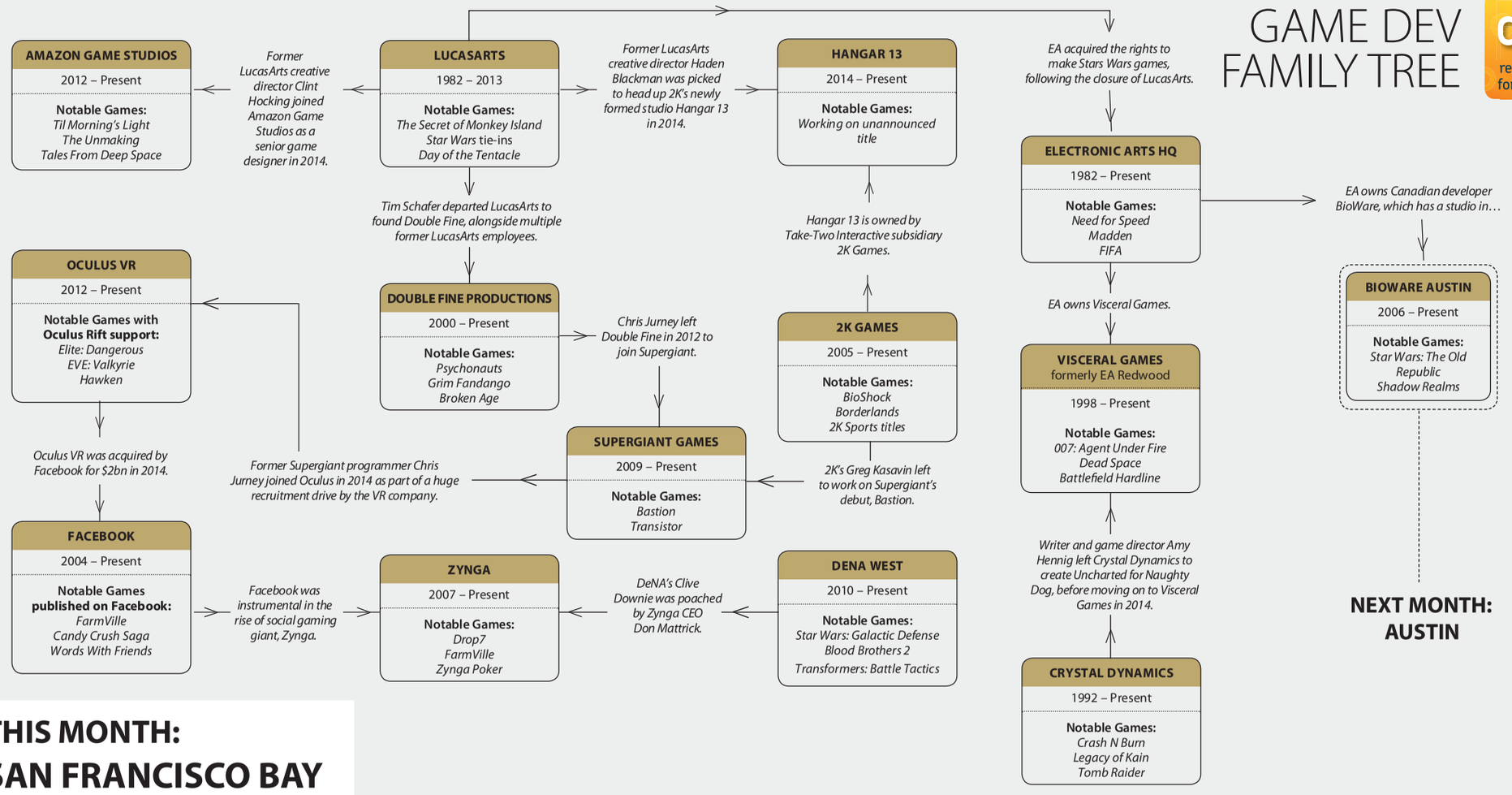

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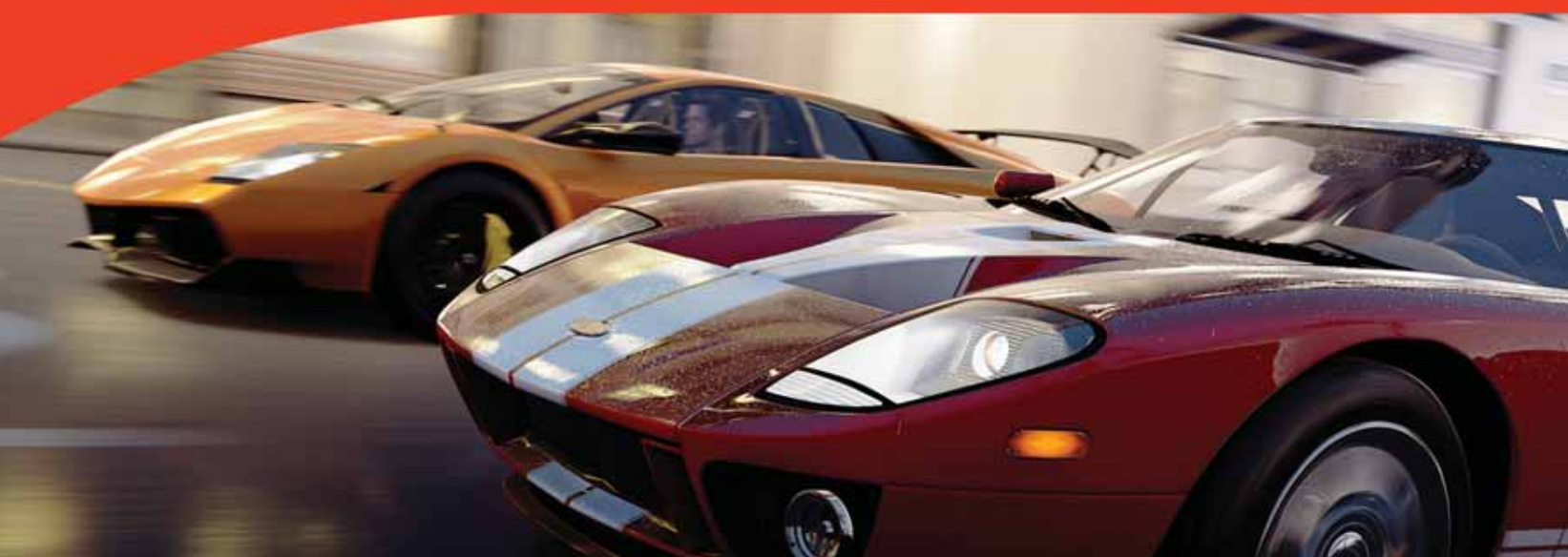

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We don't intend to become the largest studio in the world, but we do intend to become the best. Our debut title, Forza Horizon, released in 2012, was met with critical acclaim and commercial success; winning 18 Driving Game of the Year awards. Our latest title, Forza Horizon 2, takes players onto the next generation of console hardware with stunning results, marrying incredible visuals with thrilling gameplay.